



Type Activity	ACTIVITY #		CSHO ID
Complaint	1143241		

Page \_\_\_\_\_ of \_\_\_\_\_ Pages

## U.S. DOL OSHA, ATLANTA - WEST AREA OFFICE CASE FILE DIARY

1995 North Park Place, Suite 525

Atlanta, GA 30339

Phone: 678-903-7301 Fax: 770-984-8855

Establishment: Plant Bowen Georgia Power		Location: 317 Covered Bridge Rd., Euaharlee, GA 30120	
Complaint Number:	1083922	Inspection Number:	1143241
Date Complaint Received:	4/21/16	Date Response Due:	
Date Employer Notified:		Date Complaint Closed:	
Date Letter/Fax Sent:		Health: <input type="checkbox"/>	Safety: <input type="checkbox"/>

Date	Action	Initials
4/21/16	Received email complaint 30296862. Phone number not valid. Sent email requesting he contact OSHA. Emailed Letter A stating the complaint was too vague to continue with the complaint.	(b) (7)(C)
4/21/16	Letter signed	KDH
4/22/16	Given to CSHO Johnson to change complaint wording and schedule for inspection	KDH
4/22/16	Letter requesting additional information emailed to the complainant reply due back by 04/28/2016	(b) (7)(C)
4/25/16	Additional complaint given to CSHO (b) (7)(C) Schedule for inspection	KDH
4/25/16	Entered into OIS & prepared for inspection; Back to AAD Hass	(b) (7)(C)
4/25/16	Assigned to CSHO (b) (7)(C) to be opened no later than Monday, May 2	KDH
4-27-16	opening conf walk around	(b) (7)(C)
5-03-16	Resume inspection	(b) (7)(C)
7-2-16	att @ site	(b) (7)(C)
8-19-16	issued subpoena	(b) (7)(C)
9-1-16	doc Rec'd response	(b) (7)(C)
9-24-16	Closing conf conduct	(b) (7)(C)
9-24-16	Delay due to CSHO accident, & fatality; other assigned duties; also obtain info & doc	(b) (7)(C)
10-05-16	Closureg Union (Chuck Turner) Need TO BE ISSUED VIA 10-11-16*	(b) (7)(C)
10-05-16	TO AAD HASS	(b) (7)(C)
10/11/16	File reviewed. Given to Victor to process citations after citation processing, complaint letter will be developed by CSHO (b) (7)(C)	KDH
10/11/16	Citation Issued. Case File Fwd TO AD For Review and Sign.	VAG
10/11/16	Citation Mailed To Employer.	VAG
10/25/16	Rcvd Return Receipt 10/18/16 FC: 11/04	VAG
11/1/16	Attempted to contact Chuck Turner (Union) to inform of I/C	KH
11/2/16	Attempted to contact Chuck Turner. Called and left a message with Charles Turner	KDH

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature X <i>John Ballighin</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>	
<p>1. Article Addressed to: Int'l Brotherhood of Electrical Workers Attn: David Mullen, Director IBEW 900 7th St. NW RM 375 Washington, D.C. 20001 IBEW - Int'l VAG</p>		<p>B. Received by (Printed Name) C. Date of Delivery 9-9-16</p>	
<p>2. Article Number (Transfer from service label) 7014 2120 0003 4118 0828</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>	
		<p>3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>	
		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>		<p>A. Signature X <i>Suzanne Ratz</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>	
<p>1. Article Addressed to: Int'l Brotherhood of Electrical Workers Attn: Larry A. Rooks. Local 84 2791 Woodland Terrace Smyrna, GA 30080 Local 84 VAG</p>		<p>B. Received by (Printed Name) C. Date of Delivery 9/7</p>	
<p>2. Article Number (Transfer from service label) 7014 2120 0003 4118 0835</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>	
		<p>3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>	
		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	

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<p>1. Article Addressed to: Int'l Brotherhood of Electrical Workers Attn: David Mullen, Director IBEW 900 7th St. NW RM 375 Int'l - IBEW VAG</p>		<p>B. Received by (Printed Name) C. Date of Delivery 9-7-16</p>	
<p>2. Article Number (Transfer from service label) 7014 2120 0003 4118 0866</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>	
		<p>3. Service Type <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>	
		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	

# BALCH

& BINGHAM LLP

TASHWANDA PINCHBACK DIXON  
t: (404) 962-3521  
f: (866) 736-3857  
e: tpinchback@balch.com

November 4, 2016

VIA E-MAIL & U.S. MAIL

Mr. Keith Hass  
Assistant Area Director / Supervisory Safety Engineer  
Occupational Safety and Health Administration  
1995 North Park Place S.E., Suite 525  
Atlanta, GA 30339

**Re: Inspection No. 1143241  
Georgia Power Company  
317 Covered Bridge Road, S.W.  
Cartersville, Georgia 30120**

Dear Mr. Hass:

As you know, I along with Charles Morgan with Alston & Bird represent Georgia Power Company and we have been requested to respond to the Citation and Notification of Penalty ("Citations") in connection with the above-referenced inspection. Georgia Power hereby files this Notice of Contest with respect to the Citations issued by OSHA. Georgia Power specifically contests the Citations issued, the penalties, and the abatement dates proposed in the Citations.

If you have any questions about this matter, please contact me at (404) 962-3521 or Mr. Morgan at (404) 881-7187.

Sincerely,



Tashwanda Pinchback Dixon

TPD:lgr

cc: Charles Morgan

100-443686-1

November 4, 2016

**DOLPOWER000005**

Inspection: 1143241 Company: Georgia Power Company

Conference Worksheet			
Date: <u>11/3/16</u>	Time: <u>2 p.m.</u>	Date Issued: <u>10/11/2016</u>	CSHO ID:
Union Notified: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA		Supv. Notified: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		CSHO Notified: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Abatement Information Provided <input type="checkbox"/> Yes <input type="checkbox"/> No		Employer Posted I/C Notice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Items for Discussion at Conference			
Classification <input type="checkbox"/>	Citation Validity <input checked="" type="checkbox"/>	Abatement Dates <input type="checkbox"/>	
Penalty Amount <input type="checkbox"/>	Multi-Employer Citation <input type="checkbox"/>	Inspection Process <input type="checkbox"/>	
Informal Conference Notes			
OSHA Representatives:	Company Representatives:	Employee Representatives:	
<u>Keith Hass</u>	<u>Charles Morgan - Atty</u>		
	<u>Tashwanda Dixon - Atty</u>		
	<u>Kevin Johnson - STH Mgr</u>		
	<u>Kevin Pearson - Mg. Atty</u>		
<b>Pre-Discussion</b> <i>Not a legal proceeding</i> ✓ <i>Goal of the informal conference</i> ✓ <i>Monetary costs of litigation</i> ✓ <i>Final Contest Date</i> <u>11/4/16</u> <i>Abatement limitations</i> ✓ <i>Employer Posted I/C Notice</i> ✓		<b>Post Informal Topics:</b> <i>Georgia Tech Consultation</i> <i>Any Resources Needed?</i> <i>Contacts for additional Info</i> <i>Procedures for abatement</i> <i>Need CAS or CSHO Assistance?</i>	
Is additional action needed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Have problems/results been discussed with CSHO? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			

Inspection: 1143241

Company: Georgia Power

(b) (5)

**Inspection:** \_\_\_\_\_ **Company:** \_\_\_\_\_

--

Inspection: \_\_\_\_\_ Company: \_\_\_\_\_

**ISA Drafted:** ☐ Yes ☐ No

**ISA Signed:** ☐ Yes ☐ No

**Abatement Completed:** ☐ Yes ☐ No

U.S. Department of Labor  
Occupational Safety and Health Administration

Inspection Number: 1143241  
Inspection Date(s): 04/27/2016 - 09/30/2016  
Issuance Date: 10/11/2016



**Citation and Notification of Penalty**

Company Name: Georgia Power Company  
Inspection Site: 317 Covered Bridge Rd SW, Cartersville, GA 30120

**Citation 1 Item 1** Type of Violation: **Serious**

29 CFR 1910.119(f)(1)(i)(G): The employer did not develop and/or implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and did not address the steps for each operating phase including startup following a turnaround or after an emergency shutdown:

a) Georgia Power-Plant Bowen-SCR Unit # 3: The employer failed to adequately implement operating procedures that involved the pre startup operation alignment and inspection following the unit outage (turn around). Several manual drain valves on Vaporizer A and B were not positioned in the closed mode in accordance with the operation protocol. Employees and contract workers were exposed to ammonia.

**ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM**

(b) (5)

Date By Which Violation Must be Abated:  
Proposed Penalty:

10/28/2016  
\$12471.00

(b) (5)

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor  
Occupational Safety and Health Administration

Inspection Number: 1143241  
Inspection Date(s): 04/27/2016 - 09/30/2016  
Issuance Date: 10/11/2016



**Citation and Notification of Penalty**

**Company Name:** Georgia Power Company  
**Inspection Site:** 317 Covered Bridge Rd SW, Cartersville, GA 30120

**Citation 1 Item 2** Type of Violation: **Serious**

29 CFR 1910.119(f)(3): The operating procedures were not reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to facilities.

a) Georgia Power-Plant Bowen-SCR Unit # 3: The employer failed to conduct an annual certification of operation procedures to ensure that they were current and reflect current operating procedures to include changes to the process equipment. Valves on the SCR Unit #3 identification were changed on the PI &D and process equipment. These changes were not reflected in the company's written operating procedures.

**ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM**

**(b) (5)**

Date By Which Violation Must be Abated:  
Proposed Penalty:

10/28/2016  
\$12471.00

**(b) (5)**

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.



**Citation and Notification of Penalty**

**Company Name:** Georgia Power Company  
**Inspection Site:** 317 Covered Bridge Rd SW, Cartersville, GA 30120

**Citation 1 Item 3** Type of Violation: **Serious**

29 CFR 1910.119(h)(2)(ii): The employer shall inform contract employers of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process.

a) Georgia Power-Plant Bowen-Unit # 3: The employer failed to ensure that contracted workers performing assigned duties in SCR Unit # 3 were provided information informing them of the startup of SCR Unit #3 vaporizer A and B and that ammonia was being utilized in the operation.

On or about April 11, 2016 during startup of Unit # 3, the vaporization drain/vent valves were not appropriately closed resulting in an ammonia release that exposed approximately 10 contract workers to ammonia vapors.

**ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM**

**(b) (5)**

Date By Which Violation Must be Abated:  
Proposed Penalty:

10/28/2016  
\$12471.00

**(b) (5)**

U.S. Department of Labor  
Occupational Safety and Health Administration

Inspection Number: 1143241  
Inspection Date(s): 04/27/2016 - 09/30/2016  
Issuance Date: 10/11/2016



Citation and Notification of Penalty

3 p.m.  
11/4/16

Company Name: Georgia Power Company  
Inspection Site: 317 Covered Bridge Rd SW, Cartersville, GA 30120

Citation 1 Item 4 Type of Violation: **Serious**

29 CFR 1910.119(m)(3): An incident investigation team shall be established and consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved a contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident.

a). Georgia Power-Plant Bowen: SCR Unit #3: The employer failed to include contractor(s) in their PSM team investigation of an ammonia release.

On or about April 11, 2016 during startup of SCR Unit # 3, the vaporization drain/vent valves were not appropriately closed resulting in an ammonia release and exposing approximately 10 contract workers to ammonia vapors. Contract workers were exposed to an ammonia inhalation hazard causing eye, respiratory, throat and other affected conditions to occur.

**ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM**

(b) (5)

Date By Which Violation Must be Abated:  
Proposed Penalty:

10/28/2016  
\$12471.00

(b) (5)

*Christi Griffin*  
Christi Griffin  
Area Director

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

**U.S. Department of Labor**  
Occupational Safety and Health Administration  
1995 North Park Place  
Suite 525  
Atlanta, GA 30339  
Phone: 678-903-7301 Fax: 770-984-8855



## INVOICE / DEBT COLLECTION NOTICE

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**Company Name:** Georgia Power Company  
**Inspection Site:** 317 Covered Bridge Rd SW, Cartersville, GA 30120  
**Issuance Date:** 10/11/2016

<b>Summary of Penalties for Inspection Number</b>	<b>1143241</b>
<b>Citation 1, Serious</b>	<b>\$49884.00</b>
<b>TOTAL PROPOSED PENALTIES</b>	<b>\$49884.00</b>

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To avoid additional charges, please remit payment promptly to this Area Office for the total amount of the uncontested penalties summarized above. Make your check or money order payable to: "DOL-OSHA". Please indicate OSHA's Inspection Number (indicated above) on the remittance. You can also make your payment electronically on [www.pay.gov](http://www.pay.gov). On the left side of the pay.gov homepage, you will see an option to Search Public Forms. Type "OSHA" and click Go. From the results, click on **OSHA Penalty Payment Form**. The direct link is <https://www.pay.gov/paygov/forms/formInstance.html?agencyFormId=53090334>. You will be required to enter your inspection number when making the payment. Payments can be made by credit card or Automated Clearing House (ACH) using your banking information. Payments of \$25,000 or more require a Transaction ID, and also must be paid using ACH. If you require a Transaction ID, please contact the OSHA Debt Collection Team at (202) 693-2170.

OSHA does not agree to any restrictions or conditions or endorsements put on any check, money order, or electronic payment for less than the full amount due, and will cash the check or money order as if these restrictions or conditions do not exist.

If a personal check is issued, it will be converted into an electronic fund transfer (EFT). This means that our bank will copy your check and use the account information on it to electronically debit your account for the amount of the check. The debit from your account will then usually occur within 24 hours and will be shown on your regular account statement. You will not receive your original check back. The bank will destroy your original check, but will keep a copy of it. If the EFT cannot be completed because of insufficient funds or closed account, the bank will attempt to make the transfer up to 2 times.



Get Easy Tracking Updates  
Sign up for My USPS.

Tracking Number: 70142120000341181412



Delivered

## Product & Tracking Information

Postal Product:

Features:

Certified Mail™

## Available Actions

Text Updates

Email Updates

DATE & TIME	STATUS OF ITEM	LOCATION
October 14, 2016, 12:53 pm	Delivered, Left with Individual	CARTERSVILLE, GA 30120
October 13, 2016, 10:53 pm	Departed USPS Facility	ATLANTA, GA 30304
October 13, 2016, 6:18 am	Arrived at USPS Facility	ATLANTA, GA 30304
October 13, 2016, 12:50 am	Arrived at USPS Facility	NORTH METRO, GA 30026

## Track Another Package

Tracking (or receipt) number

Track It

## Manage Incoming Packages

Track all your packages from a dashboard.  
No tracking numbers necessary.

Sign up for My USPS



ON ABOUT.USPS.COM  
About USPS Home  
Newsroom  
USPS Service Updates  
Forms & Publications

OTHER USPS SITES  
Business Customer Gateway  
Postal Inspectors  
Inspector General  
Postal Explorer

LEGAL INFORMATION  
Privacy Policy  
Terms of Use  
FOIA  
No FEAR Act EEO Data

## Hass, Keith - OSHA

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**From:** Hass, Keith - OSHA  
**Sent:** Friday, November 04, 2016 9:20 AM  
**To:** 'tpinchback@balch.com'  
**Subject:** Georgia Power Company (OSHA Inspection 1143241)

Good Morning Tashwanda,

We scheduled a phone call today at 3 p.m. to discuss a settlement offer. In the interest of saving time since today is the final contest date I wanted to go ahead and give you our settlement offer so that you could have time to consult with the company. After speaking with the Compliance Officer, the Regional Office and the Solicitor's Office this is the settlement offer we are extending:

(b) (5)

If you have any questions feel free to contact me.

*Keith D. Hass, MPH*  
*Assistant Area Director*  
*Occupational Safety and Health Administration*  
*1995 North Park Place S.E., Suite 525*  
*Atlanta, GA 30339*  
*Main Phone: (678) 903-7301*  
*Office Phone: (678) 903-7304*



SEP 06 2016

TASHIWANDA PINCHBACK DIXON  
t: (404) 962-3521  
f: (866) 736-3857  
e: tpinchback@balch.com

September 2, 2016

VIA FEDEX

Christi Griffin  
Area Director  
Occupational Safety and Health Administration  
Atlanta West Area Office  
1995 North Park Place, SE, Suite 525  
Atlanta, GA 30339

Re: Georgia Power Company Inspection No. 1102415

Dear Ms. Griffin:

Georgia Power Company is in receipt of your *subpoena duces tecum* dated August 18, 2016. Below please find Georgia Power's response:

1. Enclosed as Attachment A are non-privileged emails related to the ammonia release from the following individuals: Brandon Dillard – Plant Bowen Plant Manager; Ted Burnley – Safety and Health Coordinator for Georgia Power Generation; Kevin Johnson – Generation Safety and Health Manager; Kayla Mero – Compliance Manager at Plant Bowen; and Jeff Pajor – Safety Specialist at Plant Bowen.
2. Enclosed as Attachment B are non-privileged reports created or received related to the ammonia release, to include:
  - a. Process Safety Management and Risk Management Plan Incident Investigation Form
  - b. Relevant portions of the Unit 3&4 Shift Summary Report for April 11, 2016
  - c. Relevant portions of the Unit 3&4 Shift Summary Report for April 12, 2016
  - d. National Steel City's Incident Notification Form
  - e. Ammonia Exposure Incident Form
  - f. Employees' Report of Injury Forms

- g. August 5, 2016 letter from Tashwanda Pinchback Dixon to CHSO (b) (7)(C)
3. Enclosed as Attachment C are non-privileged meeting minutes related to the ammonia release.
  4. All non-privileged meeting notes have already been produced and attached in either Attachments A or C.
  5. Enclosed as Attachment D are operator policies, procedures and/or programs, project plans and inspection sheets related to the turnaround activities on Unit 3 on or about April 11, 2016. They include the following documents:
    - a. SCR pre-operation system alignment and inspection checklist
    - b. Unit 3 Normal Boiler Checklist from April 11, 2016
    - c. Unit 3 Normal Boiler Checklist from April 12, 2016
    - d. Vaporizer inlet strainer transfer and isolation procedure
    - e. Selective Catalytic Reduction (SCR) Process
  6. Although National Steel City was hired by Southern Company – not Georgia Power – Georgia Power has obtained and enclosed as Attachment E written documentation related to the safety and health review for National Steel City.
  7. Although National Steel City was hired by Southern Company – not Georgia Power – Georgia Power has obtained and enclosed as Attachment F Southern Company's Contractor Safety, Health, and Environmental Orientation Checklist completed by National Steel City and the Ammonia Awareness training presented to National Steel City prior to the startup of Unit 3 on April 11, 2016. Also enclosed as Attachment F are acknowledgments from the National Steel City employees that they received hazard communications training at Plant Bowen.
  8. Enclosed as Attachment G are documents identifying the designated personnel for the startup of the Unit 3 vaporizer on April 11, 2016, including (b) (7)(D), the person responsible for the start-up and verification of alignment of the Unit 3 equipment.

I trust this information satisfies your request for documents. If you need to discuss this further, you may reach me at 404-962-3521.

Christi Griffin  
September 2, 2016  
Page 3

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Sincerely,

  
Tashwanda Pinchback Dixon

TPD:lgr  
Enclosures

**BALCH**  
& BINGHAM LLP

TASHWANDA PINCHBACK DIXON  
T: (404) 962-3521  
F: (866) 736-3857  
E: tpinchback@balch.com

August 5, 2016

**VIA E-MAIL** (b) (7)(C)

(b) (7)(C)

Certified Safety and Health Officer  
Occupational Safety and Health Administration  
1995 North Park Place, S.E., Suite 525  
Atlanta, GA 30339

Dear (b) (7)(C)

This letter is to follow up on questions you asked and the documents you requested during your onsite investigation at Plant Bowen on July 22, 2016. If you have any other questions, please let me know, and we will answer them as best we can.

*Explain the setup of the vaporizer and its subparts, including what components were replaced during the outage and placed back in service during the startup process.*

The vaporizer is one unit that consists of 3 parts – 3A, 3B, and 3C. All three subparts were replaced during the shutdown. Upon start up, only parts 3A and 3B were placed back in service. At 04:26 pm est, 3B Vaporizer inlet valve automatically opened once the proper temperature was reached. At 04:28 pm est, 3A Vaporizer inlet valve automatically opened once the proper temperature was reached. As a result, ammonia began to leak out of 3A and 3B. Within 4 minutes of the start of the leak, Georgia Power detected the leak and closed the vaporizer inlet valves. (b) (5) MT

*What is the name of the auxiliary equipment operator ("AEO") who was present for the start-up and verification of alignment of Unit 3?*

(b) (7)(D) is the AEO who was present for the start-up and verification of alignment of the Unit 3 equipment. He verified alignment of the vaporizer for operation. He then started the flow of ammonia to Unit 3 at the vaporizer skids. (b) (7)(D) opened the manual valve allowing ammonia from the tank farm up to the automatic valves on each vaporizer.

*What is the name of the boiler turbine operator ("BTO") who placed the 3A & 3B vaporizers in service?*

(b) (7)(D) is the BTO who placed the 3A & 3B vaporizers in service.

*Produce the checklist that was completed during initial start-up.*

Georgia Power does not have the requested checklist. At the time of the release, (b) (7)(D) had received extensive on the job ammonia system operating training and completed his classroom training on December 4, 2015. Therefore, (b) (7)(D) was not required to complete the SCR pre-operational checklist during his initial start-up of the vaporizer system. (b) (7)(D) last received ammonia system operator training on November 16, 2015.

*Identify the witnesses listed on the incident investigation report.*

(b) (7)(D) was in the control room and smelled ammonia. He left the control room once Operations stopped the ammonia flow.

(b) (7)(D) was on the baselab of Unit 3, smelled ammonia, and immediately called all Vulcan and Fluor contractors to the contractor rally point for a headcount.

(b) (7)(D) was at the plant during the event. He never smelled ammonia and assisted once the incident had occurred.

*Has any work been performed on the SCR that would affect the vaporizers since the incident?*

No work has been performed on the SCR that would affect the vaporizers since April 11, 2016.

*Who are the day shift and night shift operators for April 11, 2016?*

The following personnel worked the dayshift on Unit 3 (7am to 7pm) on April 11, 2016 - (b) (7)(D)

(b) (7)(D)

(b) (7)(D)

The following personnel worked the night shift on Unit 3 (7pm to 7am) on April 11-12, 2016 -

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

*Has Georgia Power implemented GHS into its hazardous communication plan and conducted training on it?*

The components of GHS have been incorporated into Georgia Power's hazardous communications training and all employees have been trained on it as of 2015.

*Provide a copy of Georgia Power's written contractor's program, mechanical integrity program, and incident investigation program.*

(b) (7)(C)

August 5, 2016

Page 3

The contractors who reported smelling the ammonia were contracted through Southern Company Services. Therefore, we have attached a copy of Southern Company's contractor's program. Please let me know if you would still like to see Georgia Power's contractor's program.

Georgia Power produced its mechanical integrity program on July 6, July 8, and July 12. If what we produced is not sufficient, please tell us what is missing and we will see if we have it.

Attached is Georgia Power's incident investigation program.

*Provide a copy of the work schedule for the outage.*

Please see attached document.

*Provide a copy of the contract between Southern Company and Georgia Power.*

We do not believe there is a contract between Southern Company and Georgia Power. Georgia Power is a subsidiary of Southern Company.

*Provide a picture of the handheld ammonia detection monitor.*


Please see attached photograph.

*Provide the certification for the BTOs and OTLs in operations on the operations PSM training on ammonia.*

Georgia Power tracks its employee trainings electronically. Attached is a report of all the BTOs and OTLs showing when they received their PSM training on ammonia, which is a part of Georgia Power's hazardous communications training. We have also attached a copy of the ammonia system operators' training records.

I hope this letter sufficiently addresses your questions. If you need any more information, please don't hesitate to contact me either by email or at 404-962-3521.

Sincerely,



Tashwanda Pinchback Dixon

TPD:lgr  
Enclosures

cc: Jeff Pajor (via email)  
Ted Burnley (via email)

(b) (7)(C) , [REDACTED] - OSHA

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**From:** OSHA Area Office Atlanta West  
**Sent:** Friday, April 22, 2016 8:39 AM  
**To:** (b) (7)(C) - OSHA  
**Subject:** FW: Plant Bowen GA Power Complaint No 1083865

FYI

**From:** (b) (7)(D)  
**Sent:** Friday, April 22, 2016 7:12 AM  
**To:** OSHA Area Office Atlanta West  
**Subject:** Fwd: Plant Bowen GA Power Complaint No 1083865

----- Forwarded message -----

**From:** (b) (7)(D)  
**Date:** Friday, April 22, 2016  
**Subject:** Plant Bowen GA Power Complaint No 1083865  
**To:** OSHA Area Office Atlanta West <[OSHAAtlantaWest@dol.gov](mailto:OSHAAtlantaWest@dol.gov)>

(b) (7)(D)

(b) (7)(D)

On Thursday, April 21, 2016, OSHA Area Office Atlanta West <[OSHAAtlantaWest@dol.gov](mailto:OSHAAtlantaWest@dol.gov)> wrote:

(b) (7)(D)

If you have any questions, please contact our office at 678-903-7301.

Please visit [www.osha.gov](http://www.osha.gov) for additional information or follow us

(b) (7)(C) - OSHA

---

**From:** OSHA Area Office Atlanta West  
**Sent:** Thursday, April 21, 2016 5:55 PM  
**To:** (b) (7)(D)  
**Subject:** Plant Bowen GA Power Complaint No 1083865  
**Attachments:** Plant Bowen Goergia Power Letter A\_1083922.pdf

(b) (7)(D)

If you have any questions, please contact our office at 678-903-7301.

Please visit [www.osha.gov](http://www.osha.gov) for additional information or follow us

Preventing Heat Illness in Outdoor Workers  
WATER REST SHADE

Sign up for the latest news

OSHA QuickTakes

**U.S. Department of Labor**

Occupational Safety and Health Administration  
Atlanta West Area Office  
1995 North Park Place  
Suite 525  
Atlanta, GA 30339  
Telephone: (678) 903-7301 Facsimile: (770) 984-8855  
Email: UNKNOWN  
[www.osha.gov](http://www.osha.gov)



**Reply to the Attention of Area Director**

April 21, 2016

**(b) (7)(D)**

RE: OSHA Complaint No. 1083922

Dear **(b) (7)(D)**

We received your notice of alleged hazards against Plant Bowen Georgia Power which you filed with the Occupational Safety and Health Administration (OSHA) electronically on April 21, 2016.

After careful review, we have decided not to conduct an inspection because:

The notice is too vague and unsubstantiated for me to tell whether or not a workplace hazard exists.

If you can provide further information concerning this notice which you think we should consider, please contact us by April 28, 2016..

Section 11(c) of the OSH Act provides protection for employees against discrimination because of their involvement in protected safety and health related activity. If you believe you are being treated differently or action is being taken against you because of your safety or health activity, you may file a complaint with OSHA. You should file this complaint as soon as possible, since OSHA normally can accept only those complaints filed within 30 days of the alleged discriminatory action.

Your interest in workplace health and safety is appreciated, and I am sorry that we cannot assist you at this time.

Sincerely,

A handwritten signature in black ink, appearing to read "Keith Hars" with a stylized flourish below it.

Christi Griffin  
Area Director

# United States of America

DEPARTMENT OF LABOR  
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

---

## *SUBPOENA DUCES TECUM*

---

To: Mr. Ted Burnley  
Vice President of Operations  
Georgia Power, Inc.  
317 Euharlee Road  
Euharlee, Georgia 30120

Pursuant to *Section 8(b) of the Occupational Safety and Health Act (29 U.S.C § 657(b))* you are hereby required to produce the following books, papers and documents to Christi Griffin, Area Director, Atlanta West Area Office, or her designated representative(s) of the OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, UNITED STATES DEPARTMENT OF LABOR, located at **1995 North Park Place, S.E., Suite 525**, in the City of **Atlanta, Georgia 30339** by **10:00 o'clock AM on the 6th day of September 2016**.

1. Copies of any and all emails and/or messages related to the ammonia release that occurred in Unit #3 at Plant Bowen, 317 Euharlee Road, Euharlee, Georgia occurring on April 11, 2016.
2. Copies of any and all reports including but not limited to contractor's reports and internal investigation reports created or received related to the ammonia release that occurred in Unit #3 at Plant Bowen, 317 Euharlee Road, Euharlee, Georgia occurring on April 11, 2016.
3. Copies of any and all meeting minutes related to the ammonia release that occurred in Unit #3 at Plant Bowen, 317 Euharlee Road, Euharlee, Georgia occurring on April 11, 2016.
4. Copies of any and all notes related to the ammonia release that occurred in Unit #3 at Plant Bowen, 317 Euharlee Road, Euharlee, Georgia occurring on April 11, 2016.
5. Copies of any and all operator policies, procedures and/or programs, project plans and inspection check sheets for the shutdown and startup of Unit #3 related to all turn around activities between January 1, 2016 and July 1, 2016 at Plant Bowen, 317 Euharlee Road, Euharlee, Georgia.

6. Copies of any and all written documentation related to the contractor's safety and health review for Southern Company and National Steel City.
7. Copies of any and all written documentation on how contractors were informed of the potential fire, explosion, and/or toxic release hazards in their work area prior to the 2016 turnaround activities in Unit #3 at Plant Bowen, 317 Euharlee Road, Euharlee, Georgia.
8. Any and all documents related to the person responsible for the startup and the designated personnel for startup of Unit #3 on April 11, 2016 at Plant Bowen, 317 Euharlee Road, Euharlee, Georgia.



IN TESTIMONY WHEREOF I have hereunto affixed my signature and the seal of the UNITED STATES DEPARTMENT OF LABOR at Atlanta, Georgia *this 18th day of August 2016.*

*Christi Griffin*

---

Christi Griffin, Area Director, Atlanta West Area Office  
Occupational Safety and Health Administration

RETURN OF SERVICE

I hereby certify that a duplicate original of the within subpoena was

Duly served  
(Indicate by check  
method used.)



in person,  
by registered mail,  
by facsimile,  
by leaving at principal office  
or place of business, to wit:

\_\_\_\_\_  
\_\_\_\_\_

on the person named herein on

8-19-2016

(Month, day, year)

JM Burnley

(Name of person making service)

Safety & Health Coord.

(Official title)

I certify that the person named herein was in attendance as a witness at

(b) (7)(C)

3. Department of Labor

Occupational Safety and Health Administration  
Atlanta-West Area Office  
1995 North Park Place SE, Suite 525  
Atlanta, Georgia 30339  
Phone: (678) 903-7301  
Facsimile: (770) 984-8855



MEMORANDUM FOR: STANLEY E. KEEN  
Regional Solicitor

ATTN: KAREN MOCK  
OSHA COUNSEL

*Keith Hass  
for*

FROM: CHRISTI GRIFFIN  
Area Director

SUBJECT: Case File: Georgia Power Company  
Inspection # 1143241

(b) (5)

(b) (5)

If you have any questions please give Keith Hass or myself a call at 678-903-7301.

Enclosure

**U.S. Department of Labor**

Occupational Safety and Health Administration  
Atlanta-West Area Office  
1995 North Park Place SE, Suite 525  
Atlanta, Georgia 30339  
Phone: (678) 903-7301  
Facsimile: (770) 984-8855



MEMORANDUM FOR: STANLEY E. KEEN  
Regional Solicitor

ATTN: KAREN MOCK  
OSHA COUNSEL  
*Keith Hass*  
*for*

FROM: CHRISTI GRIFFIN  
Area Director

SUBJECT: Case File: Georgia Power Company  
Inspection # 1143241

The subject files (or correspondence) are submitted for:

**Inspection No. 1143241**

(b) (5)

cc: Kurt A. Petermeyer, Regional Administrator  
Ben Ross, Deputy Regional Administrator



**U.S. DEPARTMENT OF LABOR**  
Occupational Safety and Health Administration  
Region No. 04 Area Office City 0860

RE: Case File: Georgia Power Company (Inspection # 1143241)  
Employer's Name

(b) (5)

## U.S. Department of Labor

Occupational Safety and Health Administration  
1995 North Park Place  
Suite 525  
Atlanta, GA 30339  
Phone: 678-903-7301 Fax: 770-984-8855



### Citation and Notification of Penalty

**To:**

Georgia Power Company  
and its successors  
317 Covered Bridge Rd SW  
Cartersville, GA 30120

**Inspection Number:** 1143241

**Inspection Date(s):** 04/27/2016 - 09/30/2016

**Issuance Date:** 10/11/2016

**Inspection Site:**

317 Covered Bridge Rd SW  
Cartersville, GA 30120

*The violation(s) described in this Citation and Notification of Penalty is (are) alleged to have occurred on or about the day(s) the inspection was made unless otherwise indicated within the description given below.*

This Citation and Notification of Penalty (this Citation) describes violations of the Occupational Safety and Health Act of 1970. The penalty(ies) listed herein is (are) based on these violations. You must abate the violations referred to in this Citation by the dates listed and pay the penalties proposed, unless within 15 working days (excluding weekends and Federal holidays) from your receipt of this Citation and Notification of Penalty **you either call to schedule an informal conference (see paragraph below) or** you mail a notice of contest to the U.S. Department of Labor Area Office at the address shown above. Please refer to the enclosed booklet (OSHA 3000) which outlines your rights and responsibilities and which should be read in conjunction with this form. Issuance of this Citation does not constitute a finding that a violation of the Act has occurred unless there is a failure to contest as provided for in the Act or, if contested, unless this Citation is affirmed by the Review Commission or a court.

**Posting** - The law requires that a copy of this Citation and Notification of Penalty be posted immediately in a prominent place at or near the location of the violation(s) cited herein, or, if it is not practicable because of the nature of the employer's operations, where it will be readily observable by all affected employees. This Citation must remain posted until the violation(s) cited herein has (have) been abated, or for 3 working days (excluding weekends and Federal holidays), whichever is longer.

**Informal Conference** - An informal conference is not required. However, if you wish to have such a conference you may request one with the **Assistant Area Director Keith Hass** during the 15 working day contest period. During such an informal conference you may present any evidence or views which you believe would support an adjustment to the citation(s) and/or penalty(ies).

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

FC 11/04  
Georgia Power Company  
317 Covered Bridge Rd SW  
Carters

**RECEIVED**  
OCT 18 2016  
BY: VAG

2. Article Number

(Transfer from service label)

7014 2120 0003 4118 1412

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

x Daniel Heetm

☐ Agent

☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes  
If YES, enter delivery address below ☐ No

OCT 14 2016

3. Service Type

☐ Certified Mail

☐ Express Mail

☐ Registered

☒ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

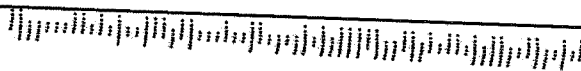
UNITED STATES POSTAL SERVICE



First-Class Mail  
Postage & Fees Paid  
USPS  
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

US DEPARTMENT OF LABOR-OSHA  
1995 NORTH PARK PLACE, SE  
SUITE 525  
ATLANTA, GEORGIA 30339



7014 2120 0003 4118 1412

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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

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Sent To  
Georgia Power Company  
Street & Apt. No.,  
or PO Box No.  
City, State, ZIP+4

PS Form 3800, July 2014

See Reverse for Instructions

If you are considering a request for an informal conference to discuss any issues related to this Citation and Notification of Penalty, you must take care to schedule it early enough to allow time to contest after the informal conference, should you decide to do so. Please keep in mind that a written letter of intent to contest must be submitted to the Area Director within 15 working days of your receipt of this Citation. The running of this contest period is not interrupted by an informal conference.

If you decide to request an informal conference, please complete, remove and post the Notice to Employees next to this Citation and Notification of Penalty as soon as the time, date, and place of the informal conference have been determined. Be sure to bring to the conference any and all supporting documentation of existing conditions as well as any abatement steps taken thus far. If conditions warrant, we can enter into an informal settlement agreement which amicably resolves this matter without litigation or contest.

**Right to Contest** – You have the right to contest this Citation and Notification of Penalty. You may contest all citation items or only individual items. You may also contest proposed penalties and/or abatement dates without contesting the underlying violations. **Unless you inform the Area Director in writing that you intend to contest the citation(s) and/or proposed penalty(ies) within 15 working days after receipt, the citation(s) and the proposed penalty(ies) will become a final order of the Occupational Safety and Health Review Commission and may not be reviewed by any court or agency.**

**Penalty Payment** – Penalties are due within 15 working days of receipt of this notification unless contested. (See the enclosed booklet and the additional information provided related to the Debt Collection Act of 1982.) Make your check or money order payable to "DOL-OSHA". Please indicate the Inspection Number on the remittance. You can also make your payment electronically on [www.pay.gov](http://www.pay.gov). On the left side of the pay.gov homepage, you will see an option to Search Public Forms. Type "OSHA" and click Go. From the results, click on **OSHA Penalty Payment Form**. The direct link is:

<https://www.pay.gov/paygov/forms/formInstance.html?agencyFormId=53090334>.

You will be required to enter your inspection number when making the payment. Payments can be made by credit card or Automated Clearing House (ACH) using your banking information. Payments of \$25,000 or more require a Transaction ID, and also must be paid using ACH. If you require a Transaction ID, please contact the OSHA Debt Collection Team at (202) 693-2170.

OSHA does not agree to any restrictions or conditions or endorsements put on any check, money order, or electronic payment for less than the full amount due, and will process the payments as if these restrictions or conditions do not exist.

**Notification of Corrective Action** – For each violation which you do not contest, you must provide *abatement certification* to the Area Director of the OSHA office issuing the citation and identified above. This abatement certification is to be provided by letter within 10 calendar days after each abatement date. Abatement certification includes the date and method of abatement. If the citation indicates that the violation was corrected during the inspection, no abatement certification is required for that item. The abatement certification letter must be posted at the location where the violation appeared and the corrective action took place or employees must otherwise be effectively informed about abatement activities. A sample abatement certification letter is enclosed with this Citation. In addition, where the citation indicates that *abatement documentation* is necessary, evidence of the purchase or repair of equipment, photographs or video, receipts, training records, etc., verifying that abatement has occurred is required to be provided to the Area Director.

**Employer Discrimination Unlawful** – The law prohibits discrimination by an employer against an

employee for filing a complaint or for exercising any rights under this Act. An employee who believes that he/she has been discriminated against may file a complaint no later than 30 days after the discrimination occurred with the U.S. Department of Labor Area Office at the address shown above.

**Employer Rights and Responsibilities** – The enclosed booklet (OSHA 3000) outlines additional employer rights and responsibilities and should be read in conjunction with this notification.

**Notice to Employees** – The law gives an employee or his/her representative the opportunity to object to any abatement date set for a violation if he/she believes the date to be unreasonable. The contest must be mailed to the U.S. Department of Labor Area Office at the address shown above and postmarked within 15 working days (excluding weekends and Federal holidays) of the receipt by the employer of this Citation and Notification of Penalty.

**Inspection Activity Data** – You should be aware that OSHA publishes information on its inspection and citation activity on the Internet under the provisions of the Electronic Freedom of Information Act. The information related to these alleged violations will be posted when our system indicates that you have received this citation. You are encouraged to review the information concerning your establishment at [www.osha.gov](http://www.osha.gov). If you have any dispute with the accuracy of the information displayed, please contact this office.



## NOTICE TO EMPLOYEES OF INFORMAL CONFERENCE

An informal conference has been scheduled with OSHA to discuss the citation(s) issued on 10/11/2016. The conference will be held by telephone or at the OSHA office located at 1995

North Park Place, Suite 525, Atlanta, GA 30339 on \_\_\_\_\_ at

\_\_\_\_\_. Employees and/or representatives of employees have a right to attend an informal conference.

## CERTIFICATION OF CORRECTIVE ACTION WORKSHEET

Company Name: Georgia Power Company  
Inspection Site: 317 Covered Bridge Rd SW, Cartersville, GA 30120  
Issuance Date: 10/11/2016

Inspection Number: 1143241

List the specific method of correction for each item on this citation in this package that does not read "Corrected During Inspection" and return to: **U.S. Department of Labor – Occupational Safety and Health Administration, 1995 North Park Place, Suite 525, Atlanta, GA 30339**

Citation Number \_\_\_\_\_ and Item Number \_\_\_\_\_ was corrected on \_\_\_\_\_  
By (Method of Abatement): \_\_\_\_\_

Citation Number \_\_\_\_\_ and Item Number \_\_\_\_\_ was corrected on \_\_\_\_\_  
By (Method of Abatement): \_\_\_\_\_

Citation Number \_\_\_\_\_ and Item Number \_\_\_\_\_ was corrected on \_\_\_\_\_  
By (Method of Abatement): \_\_\_\_\_

Citation Number \_\_\_\_\_ and Item Number \_\_\_\_\_ was corrected on \_\_\_\_\_  
By (Method of Abatement): \_\_\_\_\_

Citation Number \_\_\_\_\_ and Item Number \_\_\_\_\_ was corrected on \_\_\_\_\_  
By (Method of Abatement): \_\_\_\_\_

Citation Number \_\_\_\_\_ and Item Number \_\_\_\_\_ was corrected on \_\_\_\_\_  
By (Method of Abatement): \_\_\_\_\_

I certify that the information contained in this document is accurate and that the affected employees and their representatives have been informed of the abatement.

Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or Printed Name \_\_\_\_\_

Title \_\_\_\_\_

**NOTE: 29 USC 666(g)** whoever knowingly makes any false statements, representation or certification in any application, record, plan or other documents filed or required to be maintained pursuant to the Act shall, upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment of not more than 6 months or both.

**POSTING:** A copy of completed Corrective Action Worksheet should be posted for employee review

U.S. Department of Labor  
Occupational Safety and Health Administration

Inspection Number: 1143241  
Inspection Date(s): 04/27/2016 - 09/30/2016  
Issuance Date: 10/11/2016



**Citation and Notification of Penalty**

Company Name: Georgia Power Company  
Inspection Site: 317 Covered Bridge Rd SW, Cartersville, GA 30120

**Citation 1 Item 1** Type of Violation: **Serious**

29 CFR 1910.119(f)(1)(i)(G): The employer did not develop and/or implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and did not address the steps for each operating phase including startup following a turnaround or after an emergency shutdown:

a) Georgia Power-Plant Bowen-SCR Unit # 3: The employer failed to adequately implement operating procedures that involved the pre startup operation alignment and inspection following the unit outage (turn around). Several manual drain valves on Vaporizer A and B were not positioned in the closed mode in accordance with the operation protocol. Employees and contract workers were exposed to ammonia.

**ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM**

Date By Which Violation Must be Abated:  
Proposed Penalty:

10/28/2016  
\$12471.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor  
Occupational Safety and Health Administration

Inspection Number: 1143241  
Inspection Date(s): 04/27/2016 - 09/30/2016  
Issuance Date: 10/11/2016



**Citation and Notification of Penalty**

**Company Name:** Georgia Power Company

**Inspection Site:** 317 Covered Bridge Rd SW, Cartersville, GA 30120

**Citation 1 Item 2** Type of Violation: **Serious**

29 CFR 1910.119(f)(3): The operating procedures were not reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to facilities.

a) Georgia Power-Plant Bowen-SCR Unit # 3: The employer failed to conduct an annual certification of operation procedures to ensure that they were current and reflect current operating procedures to include changes to the process equipment. Valves on the SCR Unit #3 identification were changed on the PI &D and process equipment. These changes were not reflected in the company's written operating procedures.

**ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM**

Date By Which Violation Must be Abated:

10/28/2016

Proposed Penalty:

\$12471.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.



**Citation and Notification of Penalty**

**Company Name:** Georgia Power Company  
**Inspection Site:** 317 Covered Bridge Rd SW, Cartersville, GA 30120

**Citation 1 Item 3** Type of Violation: **Serious**

29 CFR 1910.119(h)(2)(ii): The employer shall inform contract employers of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process.

a) Georgia Power-Plant Bowen-Unit # 3: The employer failed to ensure that contracted workers performing assigned duties in SCR Unit # 3 were provided information informing them of the startup of SCR Unit #3 vaporizer A and B and that ammonia was being utilized in the operation.

On or about April 11, 2016 during startup of Unit # 3, the vaporization drain/vent valves were not appropriately closed resulting in an ammonia release that exposed approximately 10 contract workers to ammonia vapors.

**ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM**

Date By Which Violation Must be Abated:  
Proposed Penalty:

10/28/2016  
\$12471.00

**U.S. Department of Labor**  
Occupational Safety and Health Administration

**Inspection Number:** 1143241  
**Inspection Date(s):** 04/27/2016 - 09/30/2016  
**Issuance Date:** 10/11/2016



**Citation and Notification of Penalty**

**Company Name:** Georgia Power Company  
**Inspection Site:** 317 Covered Bridge Rd SW, Cartersville, GA 30120

**Citation 1 Item 4** Type of Violation: **Serious**

29 CFR 1910.119(m)(3): An incident investigation team shall be established and consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved a contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident.

a). Georgia Power-Plant Bowen: SCR Unit #3: The employer failed to include contractor(s) in their PSM team investigation of an ammonia release.

On or about April 11, 2016 during startup of SCR Unit # 3, the vaporization drain/vent valves were not appropriately closed resulting in an ammonia release and exposing approximately 10 contract workers to ammonia vapors. Contract workers were exposed to an ammonia inhalation hazard causing eye, respiratory, throat and other affected conditions to occur.

**ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM**

**Date By Which Violation Must be Abated:**

10/28/2016

**Proposed Penalty:**

\$12471.00

A handwritten signature in cursive script that reads "Christi Griffin".

**Christi Griffin**  
Area Director

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor  
Occupational Safety and Health Administration  
1995 North Park Place  
Suite 525  
Atlanta, GA 30339  
Phone: 678-903-7301 Fax: 770-984-8855



## INVOICE / DEBT COLLECTION NOTICE

**Company Name:** Georgia Power Company  
**Inspection Site:** 317 Covered Bridge Rd SW, Cartersville, GA 30120  
**Issuance Date:** 10/11/2016

<b>Summary of Penalties for Inspection Number</b>	<b>1143241</b>
<b>Citation 1, Serious</b>	<b>\$49884.00</b>
<b>TOTAL PROPOSED PENALTIES</b>	<b>\$49884.00</b>

To avoid additional charges, please remit payment promptly to this Area Office for the total amount of the uncontested penalties summarized above. Make your check or money order payable to: "DOL-OSHA". Please indicate OSHA's Inspection Number (indicated above) on the remittance. You can also make your payment electronically on [www.pay.gov](http://www.pay.gov). On the left side of the pay.gov homepage, you will see an option to Search Public Forms. Type "OSHA" and click Go. From the results, click on **OSHA Penalty Payment Form**. The direct link is <https://www.pay.gov/paygov/forms/formInstance.html?agencyFormId=53090334>. You will be required to enter your inspection number when making the payment. Payments can be made by credit card or Automated Clearing House (ACH) using your banking information. Payments of \$25,000 or more require a Transaction ID, and also must be paid using ACH. If you require a Transaction ID, please contact the OSHA Debt Collection Team at (202) 693-2170.

OSHA does not agree to any restrictions or conditions or endorsements put on any check, money order, or electronic payment for less than the full amount due, and will cash the check or money order as if these restrictions or conditions do not exist.

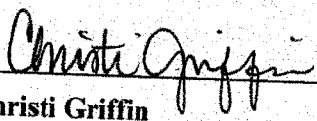
If a personal check is issued, it will be converted into an electronic fund transfer (EFT). This means that our bank will copy your check and use the account information on it to electronically debit your account for the amount of the check. The debit from your account will then usually occur within 24 hours and will be shown on your regular account statement. You will not receive your original check back. The bank will destroy your original check, but will keep a copy of it. If the EFT cannot be completed because of insufficient funds or closed account, the bank will attempt to make the transfer up to 2 times.

Pursuant to the Debt Collection Act of 1982 (Public Law 97-365) and regulations of the U.S. Department of Labor (29 CFR Part 20), the Occupational Safety and Health Administration is required to assess interest, delinquent charges, and administrative costs for the collection of delinquent penalty debts for violations of the Occupational Safety and Health Act.

**Interest:** Interest charges will be assessed at an annual rate determined by the Secretary of the Treasury on all penalty debt amounts not paid within one month (30 calendar days) of the date on which the debt amount becomes due and payable (penalty due date). The current interest rate is one percent (1%). Interest will accrue from the date on which the penalty amounts (as proposed or adjusted) become a final order of the Occupational Safety and Health Review Commission (that is, 15 working days from your receipt of the Citation and Notification of Penalty), unless you file a notice of contest. Interest charges will be waived if the full amount owed is paid within 30 calendar days of the final order.

**Delinquent Charges:** A debt is considered delinquent if it has not been paid within one month (30 calendar days) of the penalty due date or if a satisfactory payment arrangement has not been made. If the debt remains delinquent for more than 90 calendar days, a delinquent charge of six percent (6%) per annum will be assessed accruing from the date that the debt became delinquent.

**Administrative Costs:** Agencies of the Department of Labor are required to assess additional charges for the recovery of delinquent debts. These additional charges are administrative costs incurred by the Agency in its attempt to collect an unpaid debt. Administrative costs will be assessed for demand letters sent in an attempt to collect the unpaid debt.

  
Christi Griffin  
Area Director

10/11/2016  
Date

**Please Contact AAD Keith Hass to Schedule an Informal Conference at 678-903-7304.**

Atlanta, GA 30339


Re: **Inspection No. 1143241**  
**Georgia Power Company**  
**317 Covered Bridge Road, S.W.**  
**Cartersville, Georgia 30120**

Dear Mr. Hass:

As you know, I along with Charles Morgan with Alston & Bird represent Georgia Power Company and we have been requested to respond to the Citation and Notification of Penalty ("Citations") in connection with the above-referenced inspection. Georgia Power hereby files this Notice of Contest with respect to the Citations issued by OSHA. Georgia Power specifically contests the Citations issued, the penalties, and the abatement dates proposed in the Citations.

If you have any questions about this matter, please contact me at (404) 962-3521 or Mr. Morgan at (404) 881-7187.

Sincerely,

  
Tashwanda Pinchback Dixon

TPD:lgr

cc: Charles Morgan

ALABAMA | FLORIDA | GEORGIA | MISSISSIPPI | WASHINGTON, DC

DATE, TIME  
FAX NO./NAME  
DURATION  
PAGE(S)  
RESULT  
MODE

11/14 15:33  
12026065050  
00:04:13  
14  
OK  
STANDARD  
ECM

TIME : 11/14/2016 15:37  
NAME : OSHA ATLANTA WEST AD  
FAX : 7709848855  
TEL :  
SER.# : BR0A3J435742

TRANSMISSION VERIFICATION REPORT

DOLPOWER000051

**Este documento es muy importante. Si ud. No habla inglés,  
busque un traductor o llame al (678) 903-7301.**

**U.S. Department of Labor** Occupational Safety and Health Administration  
1995 North Park Place Suite 525  
Atlanta, GA 30339  
Phone: (678) 903-7301 Fax: (770) 984-8855

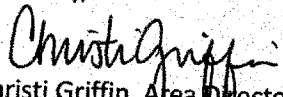


October 11, 2016

Dear Mr. Burnley,

On 04/27/2016, an OSHA compliance officer met with you or your representative as part of an inspection at 317 Covered Bridge Rd SW Cartersville, GA 30120. This letter includes the citations for the violations that were found (see summary below). Please choose one of the three options from the box to the right and complete the associated steps found on the following page **within 15 working days**. Please call us if you have any questions about the enclosed citation and/or penalties; we are here to help you choose the best option to resolve your citation as quickly as possible.

Sincerely,

  
Christi Griffin, Area Director

**Your Citation Summary**  
**Georgia Power Company**  
**Inspection Number: 1143241**

**Total Amount Due: \$49884.00**  
**Payment Due Date: 15 working days**  
**after receipt of**  
**this letter**

*You must correct each violation by the date listed in the Citation and Notification of Penalty. Please see the violations and the correction deadline for each violation starting on page 6.*

**Total Number of Violations : 4**  
**Your First Correction Deadline is:**  
**10/28/2016**

**Step 1 – Choose a Response**  
**Option and**  
**Act within 15 working days**

Respond now before you lose the ability to discuss potential adjustments to penalty amounts and/or due dates. Please choose one option below and complete the steps on the next page.

**Option #1 – Discuss with OSHA**

I would like to discuss the citation with an OSHA representative. This may lead to changes in the penalty amount, due date or correction deadlines (if appropriate).

**Option #2 – Correct and Pay**

I agree with the citation, penalties, and correction deadlines, and do not contest.

**Option #3 – Contest the Citation**

I do not agree with the citation, penalties, and/or correction deadlines, and would like to contest.

**Questions or Concerns?**

If you have any questions or concerns regarding the citation, penalties, and/or correction deadlines, please call us at (678) 903-7301.

## Step 2 – Complete One Option Checklist

Please post a copy of the citation at or near the place where each violation occurred, even if you plan to contest. You can use the checklist to the right to help plan your next steps. Please do not send in your checklist.

### Option #1 – Discuss with OSHA



1. Call: **Keith Hass, Assistant Area Director, at (678) 903-7304** as soon as possible to schedule a meeting with an OSHA representative that must occur **within 15 working days** of receiving this citation. Bring supporting documentation of existing conditions and corrections done thus far. If necessary, you can still contest the citation after this meeting. **\*\*This meeting does NOT extend your 15 working day deadline to contest the citation.\*\***

I will complete by:

☐ \_\_\_\_ / \_\_\_\_

2. Fill in and post the attached "Notice to Employees OSHA Informal Conference" after scheduling meeting.

☐ \_\_\_\_ / \_\_\_\_

### Option #2 – Correct Violations and Pay Penalty



1. Correct violations, then complete and mail the attached "Certification of Corrective Action Worksheet" along with the appropriate evidence of repair (e.g. photos, purchase orders, etc.) to the OSHA office listed on the first page, **postmarked within 10 calendar days after each violation's correction deadline and include any required evidence. If these documents are transmitted by means other than mailing, the date the Agency received the documents is the date of submission.**

I will complete by:

☐ \_\_\_\_ / \_\_\_\_

2. Pay the **Total Penalty** by using one of the following methods:  
**\*\*Include your Inspection Number (see first page) on the payment.\*\***

☐ \_\_\_\_ / \_\_\_\_

**Pay Online:** Search "OSHA" on [www.pay.gov](http://www.pay.gov) and complete the "OSHA Penalty Payment Form." Pay by debit, credit or Automated Clearing House (ACH) **within 15 working days**. Penalties over \$25,000 must be paid by ACH and require a Transaction ID (Call 202-693-2170 to obtain one).

**Pay by Check:** Mail check or money order payable to "DOL-OSHA" for the Total Penalty to the OSHA office listed on the first page **within 15 working days**.

### Option #3 – Contest the Citation



Mail a letter of intent to legally contest to the OSHA office listed on the first page, postmarked within **15 working days**.

I will complete by:

☐ \_\_\_\_ / \_\_\_\_

# U.S. Department of Labor - Occupational Safety and Health Administration

## Inspection Report

Tue Oct 11, 2016 08:11:07 AM

RID	CSHO ID	Supervisor ID	Inspection Number	Optional Report Number	Case Closed Date
0418200	(b) (7)(C)5	A2045	1143241	1362	

Establishment Name	Georgia Power Company		Doing Business As (DBA)		
Establishment Owner Name	Private Sector	Type of Business	Corporation	Primary NAICS	221112
Site Address	317 Covered Bridge Rd SW CARTERSVILLE, GA, 30120	Site Phone	(770)-606-6163	Extn	Site FAX
Business Address	317 Covered Bridge Rd SW CARTERSVILLE, GA, 30120	Business Phone	(770)-606-6163		Business FAX
Mailing Address	317 Covered Bridge Rd SW CARTERSVILLE, GA, 30120	E-mail			Mobile Phone
Site Activity	production of electricity	NAICS Inspected	221112	Days on Site	7
Federal EIN		DUNs		Temporary or Fixed Site?	Fixed Site
State Etab Id		DUNS plus4		CAGE Code	
Construction Type					

Entry	27-APR-2016		First Closing Conference	29-SEP-2016	
Opening Conference	27-APR-2016		Second Closing Conference	30-SEP-2016	
Walkaround	27-APR-2016		Exit	29-SEP-2016	

Inspection Initiating Type	Complaint		Secondary Type		
Other Initiating Type			Inspection Category	Health	
Scope of Inspection	Partial		Reason No Inspection		
Sampling Performed?	Y	SVEP	N	Expln. for No Insp.	
Federal Strategic Initiatives					
National Emphasis	CHEMNEP				
Local Emphasis					
Primary Emphasis					

Employed in Establishment	1000	Walkaround?	Y	Advance Notice?	N
Covered By Inspection	650	Interviewed?	Y	Flag for Follow-up	Y
Controlled By Employer	1000	Union?	Y	Reason for Follow-up	serious violation noted
Is this Company a current federal contractor?	N	Attempt made to capture Exec Order Info?	Y		

Parent Company Legal Name		Parent Comp Trade Name/DBA	
---------------------------	--	----------------------------	--

Parent Company Address		Phone Number		Extn	
TIN / EIN			DUNS		
CAGE Code			DUNS plus4		

Related Activity			
Activity Number	Activity Type	Satisfied	Establishment Name
1083922	Complaint	Health	Plant Bowen Georgia Power

Related Inspections		
Inspection Number	Establishment Name	Related Inspection Type

Additional Codes			
Type	ID	Value	Description

Employer Representatives Contacted							
Name	LaTasha James		Job Title	Compliance Team Lead	Occupation		
Address				Interviewed?		N	
Home		Work		Mobile		Fax	
Email				Participation		Credentials, Opening Conference	
Name	Melanie Arline		Job Title	Compliance Specialis	Occupation		
Address				Interviewed?		N	
Home		Work		Mobile		Fax	
Email				Participation		Credentials, Opening Conference	
Name	Ted Burnley		Job Title	Safetuy and Health C	Occupation		
Address				Interviewed?		N	
Home		Work		Mobile		Fax	
Email				Participation		Walk Around, Credentials, Closing Conference, Opening Conference	
Name	Jeff Pajor		Job Title	Process Safety Manag	Occupation		
Address				Interviewed?		N	

<b>Home</b>		<b>Work</b>		<b>Mobile</b>		<b>Fax</b>	
<b>Email</b>				<b>Participation</b>		Walk Around, Credentials, Closing Conference, Opening Conference	
<b>Name</b>	Tashwanda Pinchback Dixon	<b>Job Title</b>		<b>Attorney</b>		<b>Occupation</b>	
<b>Address</b>				<b>Interviewed?</b>		N	
<b>Home</b>		<b>Work</b>		<b>Mobile</b>		<b>Fax</b>	
<b>Email</b>				<b>Participation</b>		Credentials, Closing Conference	

**Employees Contacted**

<b>Name</b>	(b) (7)(D)
<b>Address</b>	
<b>Home</b>	
<b>Email</b>	
<b>Name</b>	
<b>Address</b>	
<b>Home</b>	
<b>Email</b>	
<b>Name</b>	
<b>Address</b>	
<b>Home</b>	
<b>Email</b>	
<b>Name</b>	
<b>Address</b>	
<b>Home</b>	
<b>Email</b>	
<b>Name</b>	
<b>Address</b>	
<b>Home</b>	
<b>Email</b>	

Union Information							
Union Name		IBEW		Local		84	
Rep Name		Charles Turner		Job Title		Operator	
Occupation				Interviewed?		Y	
Address				685 Old Rome Road, GA			
Home	770-684-1318	Work		Mobile		Fax	
Email				Participation		Walk Around, Citation Mailed, Credentials, Closing Conference, Opening Conference	

Authorized Employee Representatives							
Name		Chuck Turner		Organization		Occupation	
						Stewart	
Address				Interviewed?		Y	
Home		Work		Mobile	770-606-6128	Fax	
Email				Participation		Walk Around, Citation Mailed, Credentials, Closing Conference, Opening Conference	

Penalty Adjustment Factors					
Size Reduction	0%	Good Faith Reduction	0%	History Reduction	0%
Size Justification	System, set it to 0% Number of Employees was changed	Good Faith Justification		History Justification	

CSHO Signature	(b) (7)(C)	update 10/11/16
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**U.S. Department of Labor**  
Occupational Safety and Health Administration

**Notice of Alleged Safety or Health Hazards**

		Complaint Number		1083922	
Establishment Name		Plant Bowen Georgia Power			
Site Address		317 Covered Bridge Rd.			
		Euharlee, GA 30120			
		Site Phone	770-606-6411	Site FAX	
Mailing Address		317 Covered Bridge Rd. Euharlee, GA 30120			
Management Official				Telephone	
Type of Business					
Primary SIC			Primary NAICS	237130 - Power and Communication Line and Related Structures Construction	
<b>HAZARD DESCRIPTION/LOCATION.</b> Describe briefly the hazard(s) which you believe exist. Include the approximate number of employees exposed to or threatened by each hazard. Specify the particular building or worksite where the alleged violation exists.					
<p>On April 11, 2016 while working in the unit 3 &amp; 4 air heater area, Southern Company/Georgia power subjected 10 of National Steel City's employees to an exposure to ammonia. Employees were not notified of the hazards in the area and were not provided with Safety Data Sheets (SDS's) for the ammonia.</p>					

Source 1

(b) (7)(D)

Source 2

(b) (7)(D)

**OFFICIAL USE ONLY:**

Reporting ID	0418200
--------------	---------

Receipt Information	Received By (b) (7)(C)	Send OSHA-7? Yes No	Date: 04/21/2016 Time: 12:30 PM	CSHO Assigned (b) (7)(C)	Supervisor(s) Assigned J9742
Receipt Type	Online	Electronic Complaint Number			

Industry & Ownership	Primary NAICS	237130 - Power and Communication Line and Related Structures Construction	Ownership	Private Sector
----------------------	---------------	---	-----------	----------------

Complaint Evaluation	Evaluated By		Subject	Severity
	Is this a Valid Complaint?	Yes		
	Formality	Formal	Safety Health	Other
	Migrant Farmworker Camp? (Mark X if applicable)		Discrimination	No

Complaint Actions					
Action Date	Action Type	Date Response Due	Communication Method	Type of Letter/Reason	Other - Status
04/21/2016	Do Inspection = N			not enough info	
04/21/2016	Contact with Source	04/28/2016	Email Letter	Other	need more info
04/22/2016	Contact with Source	04/29/2016	Email Letter	Other	Request for additional information
04/25/2016	Do Inspection = Y			AD Discretion	
04/25/2016	Valid = Y				

Complaint Responses				
Date Response Received	Type Response Received	Evaluation	Evaluated By	Other
04/25/2016	Complainant - Provides additional Information	Satisfactory	(b) (7)(C)	

Transfer to (Name)		Transfer Date	
--------------------	--	---------------	--

Transfer to Category

Strategic Initiatives	
National Emphasis	
Local/State Emphasis	

Additional Codes			
Type	ID	Value	Description
N	11	LOG30296862	Complaints received via electronic means, e.g. email, internet
N	11	LOG30301172	Complaints received via electronic means, e.g. email, internet

Close Complaint	
-----------------	--

Comments:

**U.S. Department of Labor**

Occupational Safety and Health Administration  
Atlanta West Area Office  
1995 North Park Place  
Suite 525  
Atlanta, GA 30339  
Telephone: (678) 903-7301 Facsimile: (770) 984-8855  
Email: UNKNOWN  
[www.osha.gov](http://www.osha.gov)



**Reply to the Attention of Area Director**

April 22, 2016

(b) (7)(D)

RE: OSHA Complaint No. 1083922

(b) (7)(D)

We received your notice of alleged hazards against Plant Bowen Georgia Power which you filed with the Occupational Safety and Health Administration (OSHA) electronically on April 22, 2016.

After careful review, we have decided that in order to determine if an inspection is necessary more information is required. Please respond to the following questions no later than April 28, 2016.

(b) (7)(D)

If you can provide further information concerning this notice which you think we should consider, please answer the questions listed above or contact us by phone at 678-903-7330 and ask to speak with the Duty Officer.

I will close your complaint, and will take no further action regarding it unless I hear from you by the date listed above. If you do not agree with this decision, you may contact me for a clarification of the matter. You also have the right to an informal review by the OSHA Regional Administrator, who may be contacted at the following location:

Kurt A. Petermeyer, Regional Administrator  
Occupational Safety and Health Administration  
61 Forsyth Street, SW, Room 6T50  
Atlanta, GA 30303  
Voice telephone: 678-237-0400

This review may be obtained by submitting a written statement of your position to the Regional Administrator.

Section 11(c) of the OSH Act provides protection for employees against discrimination because of their involvement in protected safety and health related activity. If you believe you are being treated differently or action is being taken against you because of your safety or health activity, you may file a complaint with OSHA. You should file this complaint as soon as possible, since OSHA normally can accept only those complaints filed within 30 days of the alleged discriminatory action.

Your interest in workplace health and safety is appreciated, and I am sorry that we cannot assist you at this time.

Sincerely,

*Keith Hase*  
*CG*

Christi Griffin  
Area Director

(b) (7)(C)

OSHA

#1083922

**From:** Hass, Keith - OSHA  
**Sent:** Thursday, April 21, 2016 12:38 PM  
**To:** (b) (7)(C) - OSHA  
**Cc:** Griffin, Christi - OSHA; Washington, Steven A. - OSHA; Stawowy, Jeffery M. - OSHA  
**Subject:** FW: 30296862 EMPLOYEE COMPLAINT

Kelly,

(b) (5)

Keith D. Hass, MPH  
Assistant Area Director, Atlanta West Area Office  
1995 North Park Place S.E., Suite 525  
Atlanta, GA 30339  
Direct Phone: 678-903-7304  
Office Phone: 678-903-7301

Please visit [www.osha.gov](http://www.osha.gov) for additional information.

-----Original Message-----

**From:** OSHA - Complaints - ATLANTA-EAST (F126)  
**Sent:** Thursday, April 21, 2016 10:33 AM  
**To:** Fulcher, William (Bill) - OSHA; Griffin, Christi - OSHA; Hass, Keith - OSHA; Washington, Steven A. - OSHA  
**Subject:** FW: 30296862 EMPLOYEE COMPLAINT

-----Original Message-----

**From:** [Complaint@osha.gov](mailto:Complaint@osha.gov) [mailto:[Complaint@osha.gov](mailto:Complaint@osha.gov)]  
**Sent:** Thursday, April 21, 2016 9:51 AM  
**To:** OSHA - Complaints - ATLANTA-EAST (F126)  
**Subject:** 30296862 EMPLOYEE COMPLAINT

Please contact (b) (7)(D)  
Phone: (b) (7)(D)

Mailing Address

(b) (7)(D)

Email: (b) (7)(D)

within 5 working days of 21-APR-16.

Below is the complaint information

GEORGIA

Atlanta East Area Office  
2296 Henderson Mill Road,  
NE, Suite 115  
Atlanta, GA 30345  
(770) 493-6644  
(770) 493-7725 FAX

Establishment Name: Plant Bowen Georgia Power  
Site Street: 317 Covered Bridge Rd  
Site City: Euahlee  
Site State: Georgia  
Site Zip: 30120

Management Official: Brandon Dillard  
Telephone Number: 770-606-6411  
Type of Business: Power plant

Hazard Description:

(b) (7)(D)

Hazard Location:

Plant Bowen Anhydrous Ammonia System

This condition has previously been brought to the attention of:

\* The employer

I am a current employee.

Do NOT reveal my name to my employer.

Complainant Name: (b) (7)(D)

(Complainant checked the electronic signature checkbox to indicate this submission shall be considered as having an authorized written signature.)

Complainant Telephone Number: (b) (7)(D)

Complainant Mailing Address

(b) (7)(D)

Complainant Email: (b) (7)(D)

Below is the complaint information

GEORGIA

Atlanta East Area Office  
2296 Henderson Mill Road,  
NE, Suite 115  
Atlanta, GA 30345  
(770) 493-6644  
(770) 493-7725 FAX

Establishment Name: Georgia Power Plant Bowen  
Site Street: 317 covered bridge road  
Site City: Cartersville  
Site State: Georgia  
Site Zip: 30120  
Type of Business: Power plant

Hazard Description:

(b) (7)(D)

Hazard Location:

Unit 3 & 4 Air Heater area. Also the storage of Paint needs to be looked at, it is stored in a conex between the cooling tower and the unit 3 BagHouse.

This condition has previously been brought to the attention of:

\* The employer

I am Other: (b) (7)(D)

Do NOT reveal my name to my employer.

Complainant Name:

(b) (7)(D)

(Complainant did not check the electronic signature checkbox  
to indicate this submission shall be considered as having  
an authorized written signature.)

Complainant Telephone Number:

(b) (7)(D)

Complainant Mailing Address

(b) (7)(D)

Complainant Email:

(b) (7)(D)

## Hass, Keith - OSHA

---

**From:** OSHA - Complaints - ATLANTA-EAST (F126)  
**Sent:** Monday, April 25, 2016 11:59 AM  
**To:** Fulcher, William (Bill) - OSHA; Griffin, Christi - OSHA; Hass, Keith - OSHA; Washington, Steven A. - OSHA  
**Subject:** FW: 30301172 EMPLOYEE COMPLAINT

Cynthia Freeman

Program Assistant  
USDOL-OSHA; ATLANTA EAST AREA OFFICE  
2296 Henderson Mill Road, NE  
Suite 115  
Atlanta, GA 30345  
770.493.6644 (MAIN)  
770.493.7725 (FAX)

As of January 1, 2015:  
All employers\* must report:  
All work-related fatalities within 8 hours Within 24 hours, all work-related: Inpatient hospitalizations Amputations Losses of an eye How to Report Incident Call 1-800-321-OSHA (6742) Call your nearest OSHA area office, during normal business hours Please visit [www.osha.gov](http://www.osha.gov) for additional information

-----Original Message-----

**From:** [Complaint@osha.gov](mailto:Complaint@osha.gov) [mailto:[Complaint@osha.gov](mailto:Complaint@osha.gov)]  
**Sent:** Monday, April 25, 2016 10:15 AM  
**To:** OSHA - Complaints - ATLANTA-EAST (F126)  
**Subject:** 30301172 EMPLOYEE COMPLAINT

Please contact (b) (7)(D)  
Phone: (b) (7)(D)

Mailing Address

(b) (7)(D)

Email: (b) (7)(D)

within 5 working days of 25-APR-16.

Source 1

(b) (7)(D)

Source 2

(b) (7)(D)

**OFFICIAL USE ONLY:**

Reporting ID	0418200
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Receipt Information	Received By (b) (7)(C)	Send OSHA-7? Yes No	Date: 04/21/2016 Time: 12:30 PM	CSHO Assigned (b) (7)(C)	Supervisor(s) Assigned J9742
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Industry & Ownership	Primary NAICS	237130 - Power and Communication Line and Related Structures Construction	Ownership	Private Sector
----------------------	---------------	---	-----------	----------------

Complaint Evaluation	Evaluated By		Subject	Severity
	Is this a Valid Complaint?	Yes		
	Formality	Formal	Safety Health	Other
	Migrant Farmworker Camp? (Mark X if applicable)		Discrimination	No

Complaint Actions					
Action Date	Action Type	Date Response Due	Communication Method	Type of Letter/Reason	Other - Status
04/21/2016	Valid = Y				
04/21/2016	Do Inspection = N			not enough info	
04/21/2016	Contact with Source	04/28/2016	Email Letter	Other	need more info
04/22/2016	Contact with Source	04/29/2016	Email Letter	Other	Request for additional information
04/25/2016	Do Inspection = Y			AD Discretion	

Complaint Responses				
Date Response Received	Type Response Received	Evaluation	Evaluated By	Other
04/25/2016	Complainant - Provides additional Information	Satisfactory	(b) (7)(C)	

Transfer to (Name)		Transfer Date	
Transfer to Category			

Strategic Initiatives	
National Emphasis	
Local/State Emphasis	

Additional Codes			
Type	ID	Value	Description
N	11	LOG30296862	Complaints received via electronic means, e.g. email, internet
N	11	LOG30301172	Complaints received via electronic means, e.g. email, internet

Close Complaint	
-----------------	--

Comments:

Source 1

(b) (7)(D)

**OFFICIAL USE ONLY:**

Reporting ID	0418200
--------------	---------

Receipt Information	Received By (b) (7)(C)	Send OSHA-7? Yes No	Date: 04/21/2016 Time: 12:30 PM	CSHO Assigned (b) (7)(C)	Supervisor(s) Assigned J9742
---------------------	---------------------------	------------------------	------------------------------------	--------------------------------	------------------------------------

Industry & Ownership	Primary NAICS	237130 - Power and Communication Line and Related Structures Construction	Ownership	Private Sector
----------------------	---------------	---	-----------	----------------

Complaint Evaluation	Evaluated By		Subject	Severity
	Is this a Valid Complaint?	Yes		
	Formality	Formal	Safety Health	Other
	Migrant Farmworker Camp? (Mark X if applicable)		Discrimination	No

Complaint Actions					
Action Date	Action Type	Date Response Due	Communication Method	Type of Letter/Reason	Other - Status
04/21/2016	Valid = Y				
04/21/2016	Contact with Source	04/28/2016	Email Letter	Other	need more info
04/21/2016	Do Inspection = N			not enough info	

Complaint Responses				
Date Response Received	Type Response Received	Evaluation	Evaluated By	Other

Transfer to (Name)		Transfer Date	
Transfer to Category			

Strategic Initiatives	
National Emphasis	
Local/State Emphasis	

Additional Codes			
Type	ID	Value	Description
N	11	LOG30296862	Complaints received via electronic means, e.g. email, internet

Close Complaint	
-----------------	--

Comments:

(b) (7)(C)

OSHA

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**From:** OSHA Area Office Atlanta West  
**Sent:** Friday, April 22, 2016 3:52 PM  
**To:** (b) (7)(D)  
**Subject:** Complaint # 1083922  
**Attachments:** ATLW\_DOC\_20160422153519.pdf

Please review the document, answer the questions and reply back by April 28, 2016

Thank You

Duty Officer  
Safety & Occupational Health Specialist  
Atlanta West Area Office  
1995 North Park Place, Suite 525  
Atlanta Georgia 30339

## SAFETY/HEALTH NARRATIVE

Inspection Number	1143241
-------------------	---------

**COVERAGE INFORMATION:** Company purchases Ammonia from Cherokee Nitrogen LLC located in Cherokee, Alabama.

**COMPANY OVERVIEW:**

Georgia Power Company is large electricity generating plant that employs approximately 1000 employees nationwide and 400 employees at the Plant Bowen site. The company utilizes coal that is converted with hot stream to create electricity. The electricity is transform through power lines to supply the general public with electricity. Employees in the production area of Unit 3 SCR (Selective Catalytic Reduction) were engaged in operations of the unit, to include the operations of the emission control system (site of the complaint) that required the use of anhydrous ammonia. The company employs approximately 9 employees in SCR Unit 3 comprising over (2) 12 hour shifts. Employees operate the PLC system and performed other functions that require actual field checks and maintenance activities daily for 24 hours per day. The Unit 3 SCR also involved contracted workers that performed assigned maintenance and repairs as required.

**HISTORY:**

Georgia Power Company, a subsidiary of Southern Company, has had numerous safety and health inspection conducted by OSHA at a number of there Georgia Plants. A research in IMIS/OIS revealed that the company had received serious, willful and repeated violations. However, the research did not reveal that any repeated or willful violations would be proposed for this inspection. **REFERENCE APPENDIX A-3**

**NATURE AND SCOPE**

Check Applicable Boxes and Explain Findings:

☐ **COMPLAINT ITEMS: REFERENCE COMPLAINT # 1083922**

Contracted workers were exposed to ammonia in the SCR (Selective Catalytic Reduction) Unit # 3 4TH floor while performing pipefitting, welding and other activities while making repairs and installation of piping on the air heater.

**RESULTS:** It was determined that approximate 10 contracted workers employed by National Steel City were exposed to ammonia on April 11, 2016. Employees were not informed of the startup of the SCR Unit #3 which involved the startup of the vaporizers that involved ammonia circulation for the emission control process. The contracted workers were not provided information that ammonia was involved in the process on April 11, 2016.

☐ **Accident Investigation Summary & Findings:**

At the time of the inspection, it was established that the contracted workers were performing assigned duties involving the repairs and maintenance on the air heater located on the 4<sup>TH</sup> floor in SCR Unit 3. It was also found that employees of Georgia Power were engaged in the startup of Unit 3 SCR following several months of turnaround (outage). The Company officials stated that SCR Unit had been in turnaround mode since January to make repairs and perform maintenance on the unit. However, documents provided during the inspection suggested that the turnaround had been in progress prior to December, 2015. The turnaround (outage) was completed around the end of March, 2016 when the Unit was released for Startup. On or around April 11, 2016, at approximately 4:00 PM the ammonia was introduced back into the SCR Unit # 3 for the purpose of emission control when a release occurred on SCR Unit 3 vaporizer A and B. Approximately 10 employees of National Steel City detected an ammonia odor but were not notified through an alarm activation system that an ammonia leak was occurring. It was found that the contacted workers on 4<sup>TH</sup> floor were neither informed nor aware that the Unit was in startup mode or informed that ammonia was being introduced into the vaporizer which posed a potential toxic hazard to employees in the area. The vapors became overwhelming and the contracted employees evacuated the area. The workers were taken to the onsite nurse. The workers were exposed to an inhalation hazard resulting in eye irritation, breathing difficulties; coughing, throat irritation, respiratory irritations and other hazards. However, several of the contracted workers repeatedly returned to the nurse with problems from the ammonia exposure days later. Employees were not sent for additional medical treatment with a physician for further evaluation. These issues gave rise to the alleged complaint. **REFERENCE attached Georgia Power and National Steel City Report in Appendix A- 4.**

It was also found that the startup and safety review alignment inspection was not adequately implemented to ensure valves were safely positioned for the vaporizer to be placed in service and/or brought on line to the (SCR Unit #3)

**NATURE AND SCOPE – UNUSUAL CIRCUMSTANCES** (Mark X and explain all that apply)

☐ None

☐ Denial of entry (see denial memo)

XX ☐ Delays in conducting the inspection: A delay in conducting the inspection was excessive due to the company lack of cooperation with the production of documents; repeated requesting for documents and clear and concise activities surrounding the incident occurring on 04/11/2016.

A subpoena was issued to the company on August 19, 2016 to obtain any additional information to evaluate the incident appropriately and a response was received on September 09, 2016.

**NOTE:** There was a delay on CSHO part as a result of being involved in a serious accident in which medical appointments and issues that involved time off work. There was also a delay due to CSHO involvement with a Fatality investigation that was requiring priority attention. In addition, the computer had malfunction and had to consult management, in which eventually another computer was provided.

☐ Strikes

☐ Jurisdictional Issues

☐ Trade Secrets

☐ Other

**Comments:** Credential presented; union representation; permission to enter granted.

**OPENING CONFERENCE NOTES:**

Upon arrival at the facility on April 27, 2016 at approximately 8:00 AM, CSHO meet with Ms. Latasha Jones; Safety Team Leader; and Melanie Arline; Compliance Specialist and explained the reason for OSHA's visit. Upon request for the complaint, CSHO explained that it could not be released until permission to enter was granted. A call was made to other management

officials of Georgia Power and Ms. Jones stated we had to wait for other personnel to arrive. CSHO waited until approximately 11:00 AM before an opening conference could proceed. An opening conference proceeded with Mr. Ted Burnley, Corporate Safety & Health Co-coordinator; Kate Nichols, Industrial Hygiene Manager; Tim Patten, Southern Company , Project Safety Lead; Latasha Jones, Compliance Team Leader; Jeff Pajor, Process Safety Manager; John Harrison, Process Safety Co-coordinator and Melanie Arline, Compliance Specialist. A request was made for Union representative for Georgia Power. Also joining the opening conference was Todd White, Union Steward for Nation City Steel and David Hale, Safety and Health Manager for National City Steel. Once a request was made to conduct the inspection, an immediate attack from Georgia Power Kate Nichols began. CSHO informed the company that they had a right to deny entry for the inspection. However, the inspection proceeded with limited information being provided. Most answers were that they didn't know. A request for documents was made and management made a note of the documents and they would have to gather them. A request for information was made surrounding the complaint. An explanation to the nature and scope of the inspection was addressed. The inspection proceeded with repeated interference and lack of cooperation from plant personnel. However, once the opening conference was completed and an initial request for documents was made a workaround commenced to the Unit #3 where the incident occurred. CSHO returned to the site on May 03, 2016 in which most of the documents and questions that were asked still were outstanding.

### **RECORDKEEPING**

(Copy of OSHA 300's for General Industry  
Records (Mark "X" as appropriate))

X	OSHA 300
X	OSHA 301
X	OSHA 300A

The employer maintained the required injury/illness forms.

### **RECORDKEEPING PROGRAMS**

(Other than 29 CFR 1904 requirements)

Does the employer have a recordkeeping program relating to any occupational health issues (monitoring, medical, training, respirator fit test, ventilation measurements, etc.)?

XX ☐ Yes ☐ No

Are any programs required by OSHA standards?

XX ☐ Yes ☐ No

CRF 29 1910.134: It was determined that medical evaluation and fit testing was found to be conducted for the personnel found to be involved with specific circumstances requiring the use of the respirator.

**OSHA EXPOSURE MONITORING.**

Is any sampling being performed?

X	Yes		No

Screening was conducted for ammonia to determine if any residuals were still present in the area.

**REFERENCE APPENDIX A-1**

**COMPLIANCE PROGRAMS**

(engineering controls, PPE, regulated areas, emergency procedures, compliance plans, etc.)

**A review of all appropriate and required programs were addressed. However, it took a several visits and the issuance of a subpoena to obtain documents and find answers too many of the questions and requested documents.**

**Address any relevant compliance efforts regarding potential health hazards covered by the scope of the inspection:**

It was determined that 10 contracted workers of Nation Steel City were exposed to ammonia during the startup of SCR Unit #3 vaporizer A and B on the ammonia system on April 11, 2016. It was also found through contractor and the controlling employer statements that the contracted workers were on their first day working in the Unit # 3. The contracted workers were not informed of the potential hazards present. The contracted workers were not aware that the SCR Unit #3 was beginning production and/or in progress which included the introduction of ammonia into the system. It determined that no ammonia alarm/detection or sensor was activated nor were there any warning mechanism activated during the release. Ten employees were evacuated and accounted for and transported to the onsite nurse for evaluation.

**REFERENCE 1<sup>st</sup> Aid Reports; Georgia Power and National Steel's Investigation Report attached in Appendix A-4**

**PSM COVERAGE:** Georgia Power Company was found to be covered under OSHA PSM standard and Georgia EPD RMP requirements. The company maintains, store and/or utilize over 800,000 lbs of ammonia. A NEP was not conducted due to the compliant inspection would govern most of the requirement associated with the Chemical NEP. It was determined that operational procedure, mechanical integrity, management of change, emergency action/emergency response, procedures for handling small releases and other applicable programs were in place and were being implemented to reflect employees understanding of the requirements. The company also maintained a PI&D (Piping and Instrumentation Design); Block Flow Diagram; relief valve calculation any other requirements regarding Process Safety Management.

However, there were deficiencies noted in the Georgia Power's Operation Protocol for startup protocol following an outage (turnaround). (REFERENCE associated 1B). There were also deficiencies noted

regarding the company's responsibility to contractor workers at the facility, in that, Georgia Power failed to inform the workers of the potential present of a toxic material. **REFERENCE associated 1B's.** It was further determined that the company's operation procedures had not been updated and reviewed annually to ensure the current operating practices was being utilized by all appropriate personnel. (**REFERENCE associated 1B**). The company had conducted an initial PHA in 2001 but unsolved indicators were not found to be address, specifically Item 33 and 38 of the PHA assessment. It was not clear if the company generated a resolution to the unresolved issues or not, but the attorney for the company submitted documents on September 23, 2016 that suggest that the company was in compliance. PHA (Process Hazard Analysis) had been conducted and the required 5 year audit and revalidation had been performed.

Employer and employee interviews established and confirmed that the all applicable programs and training were being conducted and implemented for exposed employees. However, it was determined that sensor were not strategically located in Unit #3 to warn personnel of an ammonia release. CSHO recommended that the company strategic place sensors or ammonia indicators in the area where most likely a release would and/or could occur.

### **PERSONAL HYGIENE FACILITIES AND PRACTICES**

(showers, lockers, change rooms, etc.)

Are any required by OSHA health standards?

x ☐ Yes    ☐ No

What Standards: 1910.151 In accordance with IIAR Bulletin

No deficiencies for the maintaining of eyewash/shower facilities found.

### **HAZARD COMMUNICATION PROGRAM**

Written Program (complete)

XX ☐ Yes    ☐

MSDS's (all)

XX ☐ Yes    ☐

Labeling (adequate)

XX ☐ Yes    ☐

Training (complete)

XX ☐ Yes    ☐

Copy of MSDS's/Program attached

XX ☐ Yes    ☐ No

Comments: It was not clear if the company had incorporated the new GHS requirements into its hazard communication program but the attorney provided documents on August 05, 2016 that suggested that the company was in compliance.

**ACCESS TO EXPOSURE & MEDICAL RECORDS: YES**

**FIRE PROTECTION AND EVACUATION PROCEDURES: YES**

However, an ammonia release occurring on 04/11/2016 resulted in no notification or activation of an alarm to warn personnel that an ammonia release was in progress. Insufficient data was available to propose a citation.

**SYSTEM SAFETY AND EMERGENCY RESPONSE: YES.** The company maintained a written ERP and had provided training to those designated as responders.

**RESPIRATOR PROGRAM: Yes.** It was found that the company maintained a respiratory protection program and employees had received training, fit testing and the appropriate medical evaluation.

**LOCKOUT TAGOUT/ ELECTRICAL SAFE WORKPRACTICES: Yes.** It was determined through review of the company PSM programs and the requirements of line breaking, lockout tagout of valves and other equipment in the ammonia process was being implemented and personnel had been trained appropriately.

**HOT WORK PERMIT:** It was found that the contracted workers were performing welding and other activities in the area that would require the issuance of a permit. However, repeated request was made but Georgia Power failed to provide the documents. However, National Steel did finally provide a permit to indicate that all safety measures had been accomplished regarding a potential fire hazards.

**CONFINED SPACE:** Although there is a requirement regarding confined space in respect to PSM, this item was not reviewed. There was not any indication that a confined space entry was being made during the course of the inspection.

**FIRST AID:** Yes

**ELECTRICAL SAFE WORKPRACTICES: YES.** The company maintained a Hot Work Permit Program but repeated request for the contractors actual hot work permit was not provided initially.

**EXPOSURE CONTROL PLAN:** Although the company maintained an onsite nurse there was no indication that blood and/or bodily fluids were associated with the incident. Not Reviewed

**LABORATORY STANDARD**

N/A

**ERGONOMIC PROBLEMS**

☐ Yes      ☒ No

If yes, complete the items 1 and 2 below.

1. Lifting (10% or more similarly exposed employees injured)
  - a. Total # of employees exposed to job:
  - b. Total # of cases for job:
  
2. CTD's (10% or more similarly exposed employees have CTD's; 5% or more CTS cases)
  - a. Total # of employees exposed to job:
  - b. Total # of cases for job:

Other significant injury/illness trends

☐ Yes      ☒ No

If yes, explain

**EVALUATION OF EMPLOYER'S OVERALL SAFETY AND HEALTH PROGRAM**

General Industry:

XX ☐ Yes    ☐ No Employer has a Safety & Health Program  
XX ☐ Yes    ☐ No Written  
XX ☐ Yes    ☐ No Copy Attached

Construction Industry: National City Steel maintained all requested programs associated with their work activities.

XX ☐ Yes    ☐ No Accident Prevention Program  
XX ☐ Yes    ☐ No Written  
XX ☐ Yes    ☐ No Copy Attached

## **Evaluation of Safety and Health Program**

(0=Nonexistent 1=Inadequate 2=Average 3=Above Average)

### Written S&H Program

- Communication to Employees
- Enforcement
- Safety Training Program
- Health Training Program
- Accident Investigation Performed
- Preventive Action Taken

Comments: Georgia Power did not provide an incident report immediately and no preventive measures were taken immediately. However, the company did indicate that they were looking into what measures would best resolve the issues regarding ammonia release. However, from April 11, 2016 until the last meeting on sight 09/22/2016, CSHO found that limited action to resolve future preventive measures involving an ammonia leak, in respect to contracted workers, had been taken. No information was provided to indicate the operational procedures had been reviewed and/or revised to ensure future outage (turnaround) will ensure all pre start up protocol would be followed.

### **CLOSING CONFERENCE NOTES**

Were any unusual circumstances encountered such as, but not limited to, abatement problems, expected contest and/or negative employer attitude? If yes, explain below.

XX ☐ Yes ☐ No

Because of the repeated lack of cooperation of management personnel in providing information and the excessive delay in providing requesting documents, CSHO determined that the company would object to any deficiencies that were found during the inspection. A closing conference will not be scheduled until a review of the issues be discussed with Keith Hass, AAD of the Atlanta west Area Office.

A closing conference was conducted on 09/29/2016 with the company attorney and management official, Jeff Pajor and Ted Burnley via conference call. (b) (7)(C) of the Atlanta West was also present. The company did not inform the union representative and CSHO requested. Therefore a separate closing will be conducted with the union.

19. Closing Conference Checklist ("x" as appropriate)

- ☐ No Violations Observed
- ☐ Gave Copy Employer Rights
- X ☐ Reviewed Hazards & Standards
- X ☐ Discuss Employer Rights/Obligations
- X ☐ Encouraged Informal Conference
- X ☐ Offered Abatement Assistance: Made recommendation to the company
- X ☐ Discussed Consultation Programs
- ☐ Employer/Employee Questionnaires

**Closing Conference Held with Employee Representative**

- ☐ Jointly    XX ☐ Separately

**Proposed Citation:**

1. CFR 1910.119 (f)(1)(i)(G): The company failed to ensure that the pre startup operation alignment and inspection checklist was implemented following a turnaround in SCR Unit #
2. CRF 1910.119 (f)(3) The employer failed to conduct an annual certification of operation procedures to ensure that they were current and reflect current operating procedures to include changes to the process equipment. Valves on the SCR Unit #3 identification was changed on the PI &D and process equipment and was not reflected in changes in the company's written operating procedures.
3. CFR 1910.119 (h)(2)(i): Employer failed to ensure that contracted workers performing assigned duties in SCR Unit # 3 were provided information to inform them of the startup of SCR Unit #3 and that ammonia was being utilized in the operation.
4. CFR 1910.119 (m)(3): The employer failed to include contractors, in which there workers were affected by the ammonia release, in the PSM team investigation.

7 1/2 Floor



Vaporizer Skid  
A C B  
Sensor Sensor

3&4 SCR Elevator



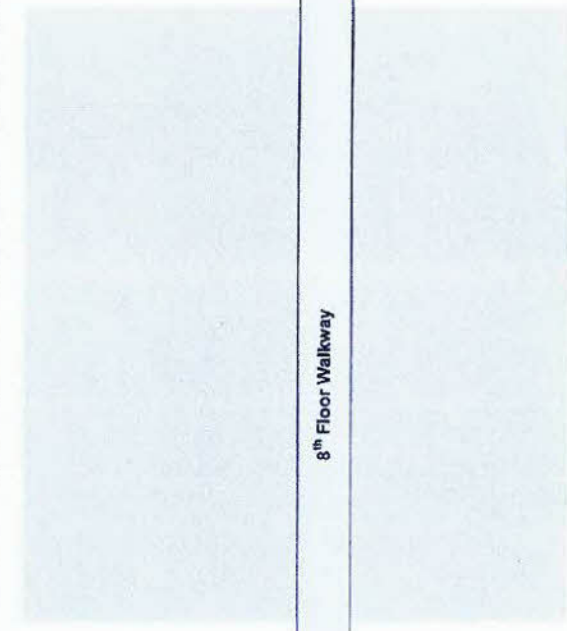
Exit Stair to Ground Level

Emergency Exit Route

Back Wall to Plant



Unit 3



Unit 4

8<sup>th</sup> Floor Walkway

3 Elevator Shaft

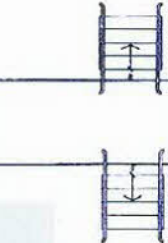


Exit Stair to Ground Level

Emergency Exit Route

Material Lift

4 Elevator Shaft



Exit Stair to Ground Level



GPC Rest Room

Coal Sample Shack

UNIT 3

UNIT 4

TRIPPER FLOOR

U.S. Department of Labor  
Occupational Safety and Health Administration

**Violation Worksheet**

Print Date : 10/05/2016

				<b>Inspection Number</b>	1143241
				<b>Opt. Insp. Number</b>	1362
<b>Establishment Name</b>	Georgia Power Company				
<b>DBA Name</b>					
<b>Type Of Violation</b>	Serious	<b>Citation Number</b>	1	<b>Item/Group</b>	1 /
<b>Number Exposed</b>	7	<b>No. Instances</b>	1	<b>REC</b>	Complaint
<b>Special Enforcement?</b>			<b>Employer's Relationship to Hazard</b>	All	
<b>Standard</b>	1910.119(f)(1)(i)(G)				
<b>Substance Codes</b>	Ammonia		<b>Photo/Video Number</b>		
<b>Alleged Violation Description</b>	<p>29 CFR 1910.119(f)(1)(i)(G): The employer did not develop and/or implement written operating procedures that provide clear instructions for safety conducting activities involved in each covered process consistent with the process safety information and did not address the steps for each operating phase including startup following a turnaround or after an emergency shutdown:</p> <p>a) Georgia Power-Plant Bowen-SCR Unit # 3: The employer failed to adequately implement operating procedures that involved the pre startup operation alignment and inspection following the unit outage (turn around). Several manual drain valves on Vaporizer A and B were not positioned in the closed mode in accordance with the operation protocol. Employees and contracted workers were exposed to ammonia.</p>				
<b>Recommended Abatement Action</b>					

**Penalty**

<b>Severity</b>	High		
<b>Severity Justification</b>	Exposure to ammonia may result in serious inhalation injury; even death.		
<b>Probability</b>	Greater		
<b>Probability Justification</b>	Leaks/ Releases occur periodically ; lack of operating procedures being implement compromise the safety and health of workers and contracted employees		
<b>Gravity</b>	High	<b>Size</b>	0%
<b>Gravity based Penalty</b>	12471.00	<b>Good Faith</b>	0%
<b>Num Times Repeated</b>		<b>History</b>	10% increase
<b>Multiplier</b>	1	<b>Quick Fix</b>	0%
<b>Calculated Penalty</b>	13718.00	<b>Proposed Penalty</b>	12471.00

**Georgia Power Company**

**INSPECTION # 1143241**

**OPERATING PROCEDURES: 1910.119 (f) (1)(i)(G)**

**FAILURE TO CLOSE MANUAL DRAIN VALVES**

**The employer failed to ensure that employees appropriately implemented the SCR Pre-Operation System Alignment and Inspection operating procedures involving the pre start up safety review for the vaporizer process in SCR Unit #3.**

**HAZARD DESCRIPTION:** inhalation hazard/

The employer failed to ensure that operating procedures were **implemented** that involved the pre operation system alignment and inspection. The inspection procedures specifically call for the vaporizer drain valves be in the closed position during the pre-operation alignment on Vaporizer A and B. **(REFERENCE Page 6 of 2141.800 in accordance with (2141.840) Operation Procedures Ammonia Vaporizer and Flow Control (AFCU) Pre Operation Alignment Procedures)** The # 3 SCR Unit was being placed back on line following several months of an outage (turnaround project). At the time the ammonia was introduced into the system, no drain valve verification check and/or inspection was conducted on Vaporizer A and Vaporizer B prior to the start of the ammonia into the process. The operator failed to close major drain valves on the vaporizer units that resulted in a release of ammonia. Employees were exposed to ammonia while performing assigned operator duties involving the operation of the SCR Unit # 3. On or about April 11, 2016 (10) contracted workers were exposed to ammonia while performing assigned involving the repairs on the pre heater in SCR Unit # 3- (4th floor)( **REFERENCE work order # GPC 560615**. Employees sustained eye, skin, throat, respiratory irritation, coughing from inhalation of the ammonia.

**EQUIPMENT:** The employer failed to ensure inspection procedures were implemented and verified prior to the ammonia Vaporizer A and Vaporizer B start up in the process. SCR Unit # 3.

**LOCATION:** Georgia Power Company, SCR Unit #3, 317 Covered Bridge Road, Euaharlee, Georgia

**INJURY:** May result in eye, skin, throat and respiratory irritation; At 300 PPM may result in IDLH; May result in asphyxiation; May result in immediate death.

**SEVERITY:** HIGH: Exposure to ammonia can and may result in serious respiratory injury: 300 PPM can result in IDLH: No alarm or sensor was maintained near the contracted workers on the 4<sup>th</sup> floor and it could not be determine what their exposure level actually was. However, the symptoms described during the interview suggested they experienced levels that correspond to at least 300-400 PPM. Several of the individual was still experiencing difficulties after a week had past. One individual had asthma and was experiencing symptoms during his interview.

**PROBABILITY:** GREATER: Ammonia is dangerous and very toxic when inhaled. The likely hood of an occurrence is great because of the failures found during the inspection process in regards to contracted workers. Employees were not implementing operational protocol as called for in 2141.800.

**EMPLOYER KNOWLEDGE:** Yes. The Revalidation, 2016, page 53 reference the verifying accuracy of the operating procedures to reflect the walk down, field test and other means. The company was implementing Process Safety Management to include, operating procedures for the SCR Unit #3. Procedure 2141 was a large operating policy that contains various protocols to include, many of the operating procedures required to ensure that the function of the ammonia system could perform safely. The company maintains a PSM inspection team in which perform the duties and oversite of the ammonia system to ensure procedures, training, and all aspect of compliance are maintained. The company's initial PHA (2001) Page 28: Item 33 and 38 reference the position of the valves and the company's procedures. The PHA also indicated that the recommendation were unsolved. Mr. Jeff Pajor, Process Safety Compliance Manager indicated that the conditions had been resolved verbally. The company has had a number of OSHA inspections in the past that resulted in serious violation of OSHA's standards. **(REFERENCE Procedure 2141.800 attached this 1B)**

**EMPLOYER/EMPLOYEE INFORMATION:**

Upon request for the operation procedure the company initially provided CSHO procedures 2141.800 and again on August 5, 2016 which contained the inspection protocol for pre startup of the SCR #3 Unit dated 2007. On September 2, 2016 via subpoena the company provided the same inspection protocol with a new revision date of April, 2016 in which two protocols prior to September, 2016 had been provided. Mr. Hofto, Operation Team Leader, stated in an interview that he was familiar with the sign off inspection sheet but had not been utilizing it. He also stated he did not remember if the valve were checks. He further stated he was responsible for ensuring that the checks were completed but did it through word of mouth. Mr. Hofto further stated that, he could not keep eyes on everything that the operators do and that there was not enough time in the day to do 12 things. No reason was provided as to why the inspection report was no longer being used. The response given via the company's attorney on a letter dated August 5, 2016, indicated that the operator had received training and the inspection sheet was not necessary.

**CLOSING CONFERENCE:** At the closing conference, CSHO recommended that the 2141.800 inspection protocol of the SCR operating procedures be enforced and documented utilized the inspection sheet that the company included in the procedure to minimize the possibility of a catastrophic occurrence at the facility. The Team Leader verification would confirm that the inspection protocol was completed.

**NOTE:** The facility is an electricity generating facilities that utilize coal and boilers to convert energy into electricity. The ammonia vaporizers are utilized to reduce the NOX as an emission control mechanism in the SCR. The company storage, utilize and or handle approximately 800,000 pounds of ammonia at the facility which clearly establishes the requirement to compliance with PSM (Process Safety Management).

**Proposed Penalty  
Justification:**

Previous serious violation

### Abatement Details

<b>Days to Abate</b>	10 Wkg Days	<b>Abatement Status</b>	
<b>User-entered Abatement Due Date</b>		<b>Date Abated</b>	
<b>Abatement Documentation Required?</b>	Yes	<b>Date Verified</b>	
<b>Abatement Completed Description:</b>			

### MultiStep Abatement

<b>Type/Other Type</b>	<b>Days to abate</b>	<b>User entered Abatement Due Date</b>	<b>Completed(status)</b>	<b>Verify Date</b>

### Employee Exposure

<b>Exposure Instance</b>	<b>No. Exposed</b>	<b>Employer</b>	<b>Name and Address Telephone Numbers</b>	<b>Duration</b>	<b>Frequency</b>	<b>Proximity</b>
a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	

a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	

20. **Instance Description:**      A. Hazard    B. Equipment    C. Location    D. Injury/Illness    E. Measurements

a) **Hazards-Operation/Condition-Accident:**

b) **Equipment:**

c) **Location:**

d) **Injury/Illness (and Justifications for Severity and Probability):**

e) **Measurements:**

23. **Employer Knowledge:**

24. **Comments:**

25. **Other Employer Information:**

**BWN003-YC-VL-5014**

U3 AMMONIA FLOW CONTRCL UNIT

U3 AMMONIA VAPORIZER B OUTLET

VENT / DRAIN VALVE

P&ID: E24680 SH 1

PSM





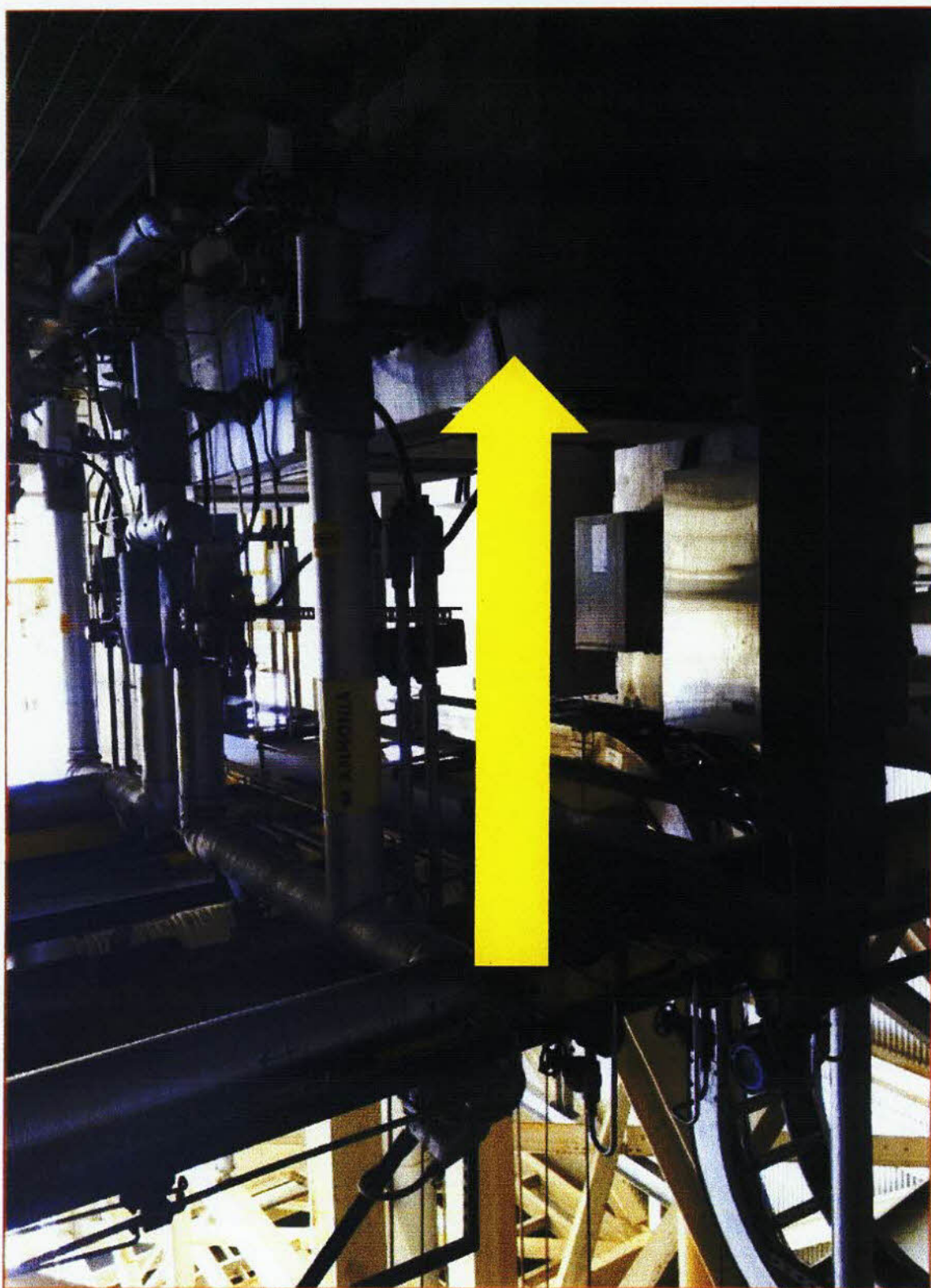
**BWN003-YC-VL-5013**  
US AMMONIA FLOW CONTROL UNIT  
US AMMONIA VAPORIZER B INLET  
VENT / DRAIN VALVE  
P&ID: E24680 SH 1

**BWN003-YC-VL-5010**

U3 AMMONIA FLOW CONTROL UNIT  
U3 AMMONIA VAPORIZER A OUTLET  
VENT / DRAIN VALVE

P&ID: E24680 SH 1





# BALCH

& BINGHAM LLP

TASHWANDA PINCHBACK DIXON  
t: (404) 962-3521  
f: (800) 736-3857  
e: tpinchback@balch.com

August 5, 2016

VIA E-MAIL (b) (7)(C)

(b) (7)(C)

Certified Safety and Health Officer  
Occupational Safety and Health Administration  
1995 North Park Place, S.E., Suite 525  
Atlanta, GA 30339

Dear (b) (7)(C)

This letter is to follow up on questions you asked and the documents you requested during your onsite investigation at Plant Bowen on July 22, 2016. If you have any other questions, please let me know, and we will answer them as best we can.

*Explain the setup of the vaporizer and its subparts, including what components were replaced during the outage and placed back in service during the startup process.*

The vaporizer is one unit that consists of 3 parts – 3A, 3B, and 3C. All three subparts were replaced during the shutdown. Upon start up, only parts 3A and 3B were placed back in service. At 04:26 pm est, 3B Vaporizer inlet valve automatically opened once the proper temperature was reached. At 04:28 pm est, 3A Vaporizer inlet valve automatically opened once the proper temperature was reached. As a result, ammonia began to leak out of 3A and 3B. Within 4 minutes of the start of the leak, Georgia Power detected the leak and closed the vaporizer inlet valves. (b) (5)

*What is the name of the auxiliary equipment operator ("AEO") who was present for the start-up and verification of alignment of Unit 3?*

(b) (7)(D) is the AEO who was present for the start-up and verification of alignment of the Unit 3 equipment. He verified alignment of the vaporizer for operation. He then started the flow of ammonia to Unit 3 at the vaporizer skids. (b) (7)(D) opened the manual valve allowing ammonia from the tank farm up to the automatic valves on each vaporizer.

*What is the name of the boiler turbine operator ("BTO") who placed the 3A & 3B vaporizers in service?*

(b) (7)(C)

August 5, 2016

Page 2

(b) (7)(D) is the BTO who placed the 3A & 3B vaporizers in service.

*Produce the checklist that was completed during initial start-up.*

Georgia Power does not have the requested checklist. At the time of the release, (b) (7)(D) had received extensive on the job ammonia system operating training and completed his classroom training on December 4, 2015. Therefore, (b) (7)(D) was not required to complete the SCR pre-operational checklist during his initial start-up of the vaporizer system. (b) (7)(D) last received ammonia system operator training on November 16, 2015.

*Identify the witnesses listed on the incident investigation report.*

(b) (7)(D) was in the control room and smelled ammonia. He left the control room once Operations stopped the ammonia flow.

(b) (7)(D) was on the baselab of Unit 3, smelled ammonia, and immediately called all Vulcan and Fluor contractors to the contractor rally point for a headcount.

(b) (7)(D) was at the plant during the event. He never smelled ammonia and assisted once the incident had occurred.

*Has any work been performed on the SCR that would affect the vaporizers since the incident?*

No work has been performed on the SCR that would affect the vaporizers since April 11, 2016.

*Who are the day shift and night shift operators for April 11, 2016?*

The following personnel worked the dayshift on Unit 3 (7am to 7pm) on April 11, 2016 (b) (7)(D)

(b) (7)(D)

(b) (7)(D)

The following personnel worked the night shift on Unit 3 (7pm to 7am) on April 11-12, 2016 –

(b) (7)(D)

(b) (7)(D)

*Has Georgia Power implemented GHS into its hazardous communication plan and conducted training on it?*

The components of GHS have been incorporated into Georgia Power's hazardous communications training and all employees have been trained on it as of 2015.

*Provide a copy of Georgia Power's written contractor's program, mechanical integrity program, and incident investigation program.*

(b) (7)(C)

August 5, 2016

Page 3

The contractors who reported smelling the ammonia were contracted through Southern Company Services. Therefore, we have attached a copy of Southern Company's contractor's program. Please let me know if you would still like to see Georgia Power's contractor's program.

Georgia Power produced its mechanical integrity program on July 6, July 8, and July 12. If what we produced is not sufficient, please tell us what is missing and we will see if we have it.

Attached is Georgia Power's incident investigation program.

*Provide a copy of the work schedule for the outage.*

Please see attached document.

*Provide a copy of the contract between Southern Company and Georgia Power.*

We do not believe there is a contract between Southern Company and Georgia Power. Georgia Power is a subsidiary of Southern Company.

*Provide a picture of the handheld ammonia detection monitor.*


Please see attached photograph.

*Provide the certification for the BTOs and OTLs in operations on the operations PSM training on ammonia.*

Georgia Power tracks its employee trainings electronically. Attached is a report of all the BTOs and OTLs showing when they received their PSM training on ammonia, which is a part of Georgia Power's hazardous communications training. We have also attached a copy of the ammonia system operators' training records.

I hope this letter sufficiently addresses your questions. If you need any more information, please don't hesitate to contact me either by email or at 404-962-3521.

Sincerely,



Tashwanda Pinchback Dixon

TPD:lgr  
Enclosures

cc: Jeff Pajor (via email)  
Ted Burnley (via email)



SEP 06 2016

TASHWANDA PINCHBACK DIXON  
t: (404) 962-3521  
f: (866) 736-3857  
e: tpinchback@balch.com

September 2, 2016

VIA FEDEX

Christi Griffin  
Area Director  
Occupational Safety and Health Administration  
Atlanta West Area Office  
1995 North Park Place, SE, Suite 525  
Atlanta, GA 30339

Re: Georgia Power Company Inspection No. 1102415

Dear Ms. Griffin:

Georgia Power Company is in receipt of your *subpoena duces tecum* dated August 18, 2016. Below please find Georgia Power's response:

1. Enclosed as Attachment A are non-privileged emails related to the ammonia release from the following individuals: Brandon Dillard – Plant Bowen Plant Manager; Ted Burnley – Safety and Health Coordinator for Georgia Power Generation; Kevin Johnson – Generation Safety and Health Manager; Kayla Mero – Compliance Manager at Plant Bowen; and Jeff Pajor – Safety Specialist at Plant Bowen.
2. Enclosed as Attachment B are non-privileged reports created or received related to the ammonia release, to include:
  - a. Process Safety Management and Risk Management Plan Incident Investigation Form
  - b. Relevant portions of the Unit 3&4 Shift Summary Report for April 11, 2016
  - c. Relevant portions of the Unit 3&4 Shift Summary Report for April 12, 2016
  - d. National Steel City's Incident Notification Form
  - e. Ammonia Exposure Incident Form
  - f. Employees' Report of Injury Forms

- g. August 5, 2016 letter from Tashwanda Pinchback Dixon to CHSO (b) (7)(C)
3. Enclosed as Attachment C are non-privileged meeting minutes related to the ammonia release.
  4. All non-privileged meeting notes have already been produced and attached in either Attachments A or C.
  5. Enclosed as Attachment D are operator policies, procedures and/or programs, project plans and inspection sheets related to the turnaround activities on Unit 3 on or about April 11, 2016. They include the following documents:
    - a. SCR pre-operation system alignment and inspection checklist
    - b. Unit 3 Normal Boiler Checklist from April 11, 2016
    - c. Unit 3 Normal Boiler Checklist from April 12, 2016
    - d. Vaporizer inlet strainer transfer and isolation procedure
    - e. Selective Catalytic Reduction (SCR) Process
  6. Although National Steel City was hired by Southern Company – not Georgia Power – Georgia Power has obtained and enclosed as Attachment E written documentation related to the safety and health review for National Steel City.
  7. Although National Steel City was hired by Southern Company – not Georgia Power – Georgia Power has obtained and enclosed as Attachment F Southern Company's Contractor Safety, Health, and Environmental Orientation Checklist completed by National Steel City and the Ammonia Awareness training presented to National Steel City prior to the startup of Unit 3 on April 11, 2016. Also enclosed as Attachment F are acknowledgments from the National Steel City employees that they received hazard communications training at Plant Bowen.
  8. Enclosed as Attachment G are documents identifying the designated personnel for the startup of the Unit 3 vaporizer on April 11, 2016, including (b) (7)(D) the person responsible for the start-up and verification of alignment of the Unit 3 equipment.

I trust this information satisfies your request for documents. If you need to discuss this further, you may reach me at 404-962-3521.

Christi Griffin  
September 2, 2016  
Page 3

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Sincerely,

  
Tashwanda Pinchback Dixon

TPD:lgr  
Enclosures

BWN 3&4-2141.800 Rev. 0

Operating Procedures

Plant Bowen

Approved (PRB)

/s/ Mike J. Faughnan

Approved (OM)

/s/ Tim Crump

Approved (MGR)

/s/ J. Tim Banks

Date : 7/18/2007

3&4-2141.800 SCR PRE-OPERATION SYSTEM ALIGNMENT  
AND INSPECTION CHECKLIST

*The only official copy of this file is the one online on the plant network. Before using a printed copy, verify that it is the most current version by checking the document effective date on the plant web site.*

Date Printed 7/25/2014

GPC 000063

DOLPOWER000103

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U.S. Department of Labor  
Occupational Safety and Health Administration

**Violation Worksheet**

Print Date : 10/05/2016

				<b>Inspection Number</b>	1143241
				<b>Opt. Insp. Number</b>	1362
<b>Establishment Name</b>	Georgia Power Company				
<b>DBA Name</b>					
<b>Type Of Violation</b>	Serious	<b>Citation Number</b>	1	<b>Item/Group</b>	2 /
<b>Number Exposed</b>	7	<b>No. Instances</b>	1	<b>REC</b>	Complaint
<b>Special Enforcement?</b>				<b>Employer's Relationship to Hazard</b>	All
<b>Standard</b>	1910.119(f)(3)				
<b>Substance Codes</b>	Ammonia		<b>Photo/Video Number</b>		
<b>Alleged Violation Description</b>	<p>29 CFR 1910.119(f)(3): The operating procedures were not reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to facilities.</p> <p>a) Georgia Power-Plant Bowen-SCR Unit # 3: The employer failed to conduct an annual certification of operation procedures to ensure that they were current and reflect current operating procedures to include changes to the process equipment. Valves on the SCR Unit #3 identification was changed on the PI &amp;D and process equipment and was not reflected in changes in the company's written operating procedures.</p>				
<b>Recommended Abatement Action</b>					

**Penalty**

<b>Severity</b>	High		
<b>Severity Justification</b>	Exposure to ammonia may result in serious inhalation injury; even death		
<b>Probability</b>	Greater		
<b>Probability Justification</b>	Leaks/ Releases occur periodically ; lack of operating procedures being implement compromise the safety and health of workers and contracted employees		
<b>Gravity</b>	High	<b>Size</b>	0%
<b>Gravity based Penalty</b>	12471.00	<b>Good Faith</b>	0%
<b>Num Times Repeated</b>		<b>History</b>	0%
<b>Multiplier</b>	1	<b>Quick Fix</b>	0%
<b>Calculated Penalty</b>	12471.00	<b>Proposed Penalty</b>	12471.00
<b>Proposed Penalty Justification:</b>			

**Georgia Power Company**

**INSPECTION # 1143241**

**OPERATING PROCEDURES NOT CERTIFIED ANNUALLY:1910.119(f)(3)**

**1910.119 (f)(3)**

**The employer failed to ensure that operating procedures for the Unit #3 SCR was reviewed updated and certified annually to ensure the procedures reflect current operating parameters to include changes to equipment.**

**HAZARD DESCRIPTION:** inhalation hazard/

The employer failed to ensure that operating procedures were reviewed and certified annually to reflect the numerical identification of valves on the vaporizers A and B in Unit # 3 SCR. The inspection procedures specifically identified the drain valves on Vaporizer A as 3/4AFCU 52 and 3/4AFCU-57 and Vaporizer B as 3/4AFCU 53 and 3/4 AFCU-58 (**REFERENCE Page 6 through page 8 of 2141.800 in accordance with (2141.840) Operation Procedures Ammonia Vaporizer and Flow Control (AFCU) Pre Operation Alignment Procedures**), but the process equipment list; PI & D and the physical label at the vaporizer identified the valves as BWN003-YC-VL 5010; BWN003-YC-VL 5013; BWN003-YC-VL 5014 and BWN003-YC-VL 5017. These manual valves were the valves left open and resulted in an ammonia release on April 11, 2016.

The # 3 SCR Unit was being placed back on line following several months of an outage (turnaround project). At the time the ammonia was introduced into the system, no drain valve verification check and/or inspection was conducted on Vaporizer A and Vaporizer B prior to the start of the ammonia into the process. The operator failed to close major drain valves on the vaporizer units that resulted in a release of ammonia. Employees were exposed to ammonia while performing assigned operator duties involving the operation of the SCR Unit # 3. On or about April 11, 2016 (10) contracted workers were exposed to ammonia while performing assigned involving the repairs on the pre heater in SCR Unit # 3- (4th floor)( **REFERENCE work order # GPC 560615**. Employees sustained eye, skin, throat, respiratory irritation, coughing from inhalation of the ammonia.

**EQUIPMENT:** The employer failed to ensure that operating procedures for the Unit #3 SCR was reviewed updated and certified annually to ensure the procedures reflect current operating parameters to include changes to equipment.

**LOCATION:** Georgia Power Company, SCR Unit #3, 317 Covered Bridge Road, Euaharlee, Georgia

**INJURY:** May result in eye, skin, throat and respiratory irritation; At 300 PPM may result in IDLH; May result in asphyxiation; May result in immediate death.

**SEVERITY:** HIGH: Exposure to ammonia can and may result in serious respiratory injury: 300 PPM can result in IDLH: No alarm or sensor was maintained near the contracted workers on the 4<sup>th</sup> floor and it could not be determine what their exposure level actually was. However, the symptoms described during the interview suggested they experienced levels that correspond to at least 300-400 PPM. Several of the

individual was still experiencing difficulties after a week had past. One individual had asthma and was experiencing symptoms during his interview.

**PROBABILITY:** GREATER: Ammonia is dangerous and very toxic when inhaled. The likely hood of an occurrence is great because of the failures found during the inspection process in regards to contracted workers. Employees were not implementing operational protocol as called for in 2141.800.

**EMPLOYER KNOWLEDGE:** Yes. Page 53 and Page 74 of the most recent 2016 Revalidation specifically reference the new tag numbers on the ammonia equipment be changed. The 2016 revalidation, page 78, item # 26 also reference the review and certification of the operating procedures. The company was implementing Process Safety Management to include, operating procedures for the SCR Unit #3. Procedure 2141 was a large operating policy that contains various protocols to include, many of the operating procedures required to ensure that the function of the ammonia system could perform safely. The company maintains a PSM inspection team in which perform the duties and oversite of the ammonia system to ensure procedures, training, and all aspect of compliance are maintained. Mr. Jeff Pajor, Process Safety Compliance Manager indicated that the company was working toward changes the valve number system. The company has had a number of OSHA inspections in the past that resulted in serious violation of OSHA's standards.

**(REFERENCE Procedure 2141.800 attached this 1B)**

**EMPLOYER/EMPLOYEE INFORMATION:**

Upon request for the operation procedure the company initially provided CSHO procedures 2141.800 and again on August 5, 2016 which contained the inspection protocol for pre startup of the SCR #3 Unit dated 2007. On September 2, 2016 via subpoena the company provided the same inspection protocol with a new revision date of April, 2016 in which two protocols prior to September, 2016 had been provided dated 2007.

**CLOSING CONFERENCE:** At the closing conference, CSHO recommended that the 2141.800 inspection protocol of the SCR operating procedures be reviewed, updated to reflect current operating practices to include equipment changes in an effort to minimize the possibility of a catastrophic occurrence at the facility.

**Abatement Details**

<b>Days to Abate</b>	10 Wkg Days	<b>Abatement Status</b>	
<b>User-entered Abatement Due Date</b>		<b>Date Abated</b>	
<b>Abatement Documentation Required?</b>	Yes	<b>Date Verified</b>	
<b>Abatement Completed Description:</b>			

**MultiStep Abatement**

<b>Type/Other Type</b>	<b>Days to abate</b>	<b>User entered Abatement Due Date</b>	<b>Completed(status)</b>	<b>Verify Date</b>

**Employee Exposure**

Exposure Instance	No. Exposed	Employer	Name and Address Telephone Numbers	Duration	Frequency	Proximity
a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	
a	7	Georgia Power Company		0.00 month	daily	
a	7	Georgia Power		0.00	daily	

		Company	(b) (7)(D)	month		
a	7	Georgia Power Company		6.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	

20. **Instance Description:**      A. Hazard    B. Equipment    C. Location    D. Injury/Illness    E. Measurements

a) **Hazards-Operation/Condition-Accident:**

b) **Equipment:**

c) **Location:**

d) **Injury/Illness (and Justifications for Severity and Probability):**

e) **Measurements:**

23. **Employer Knowledge:**

24. **Comments:**

25. **Other Employer Information:**

**BWN003-YC-VL-5014**

U3 AMMONIA FLOW CONTROL UNIT  
U3 AMMONIA VAPORIZER B OUTLET  
VENT / DRAIN VALVE

P&ID: E24680 SH 1

PSM



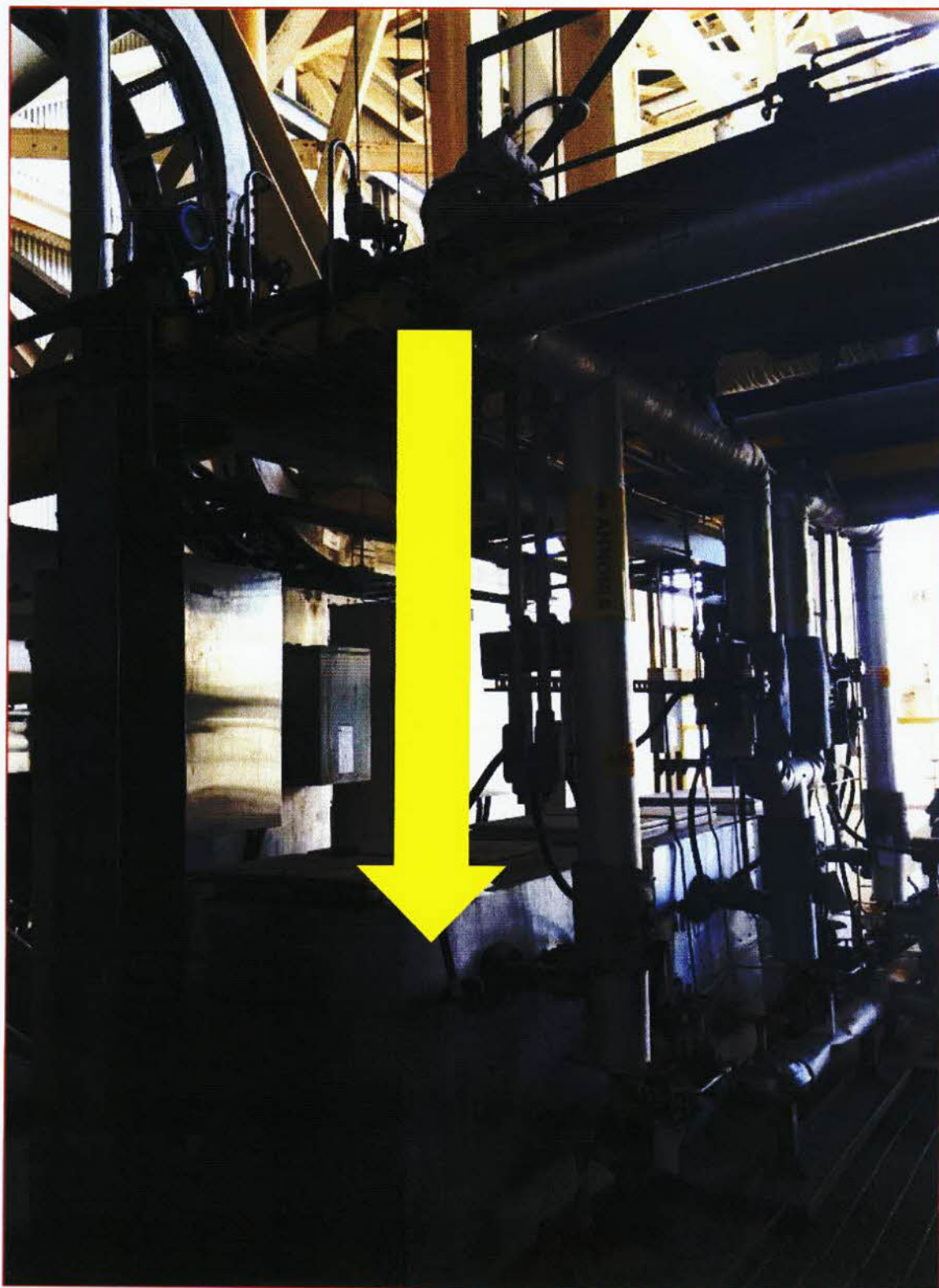


**BWN003-YC-VL-5010**

U3 AMMONIA FLOW CONTROL UNIT  
U3 AMMONIA VAPORIZER A OUTLET  
VENT / DRAIN VALVE

P&ID: E24680 SH 1





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U.S. Department of Labor  
Occupational Safety and Health Administration

**Violation Worksheet**

Print Date : 10/05/2016

		<b>Inspection Number</b>		1143241	
		<b>Opt. Insp. Number</b>		1362	
<b>Establishment Name</b>	Georgia Power Company				
<b>DBA Name</b>					
<b>Type Of Violation</b>	Serious	<b>Citation Number</b>	1	<b>Item/Group</b>	3 /
<b>Number Exposed</b>	7	<b>No. Instances</b>	1	<b>REC</b>	Complaint
<b>Special Enforcement?</b>			<b>Employer's Relationship to Hazard</b>		
<b>Standard</b>	1910.119(h)(2)(ii)				
<b>Substance Codes</b>	Ammonia		<b>Photo/Video Number</b>		
<b>Alleged Violation Description</b>	<p>29 CFR 1910.119(h)(2)(ii): The employer shall inform contract employers of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process.</p> <p>a) a) Georgia Power-Plant Bowen-Unit # 3: The employer failed to ensure that contracted workers performing assigned duties in SCR Unit # 3 were provided information to inform them of the startup of SCR Unit #3 vaporizer A and B and that ammonia was being utilized in the operation.</p> <p>On or about April 11, 2016 during startup of Unit # 3, the vaporization drain/vent valves were not appropriate closed resulting in an ammonia release and exposing approximately 10 contracted workers to ammonia vapors.</p>				
<b>Recommended Abatement Action</b>					

**Penalty**

<b>Severity</b>	High		
<b>Severity Justification</b>	see worksheet		
<b>Probability</b>	Greater		
<b>Probability Justification</b>	see worksheet		
<b>Gravity</b>	High	<b>Size</b>	0%
<b>Gravity based Penalty</b>	12471.00	<b>Good Faith</b>	0%
<b>Num Times Repeated</b>		<b>History</b>	0%
<b>Multiplier</b>	1	<b>Quick Fix</b>	0%
<b>Calculated Penalty</b>	12471.00	<b>Proposed Penalty</b>	12471.00

**Georgia Power Company**

**INSPECTION # 1143241**

**INFORMING CONTRCATORS OF THE HAZARD IN THEIR WORK AREA**

**1910.119 (h)(2)(ii)**

**The employer failed to ensure that contracted employer was provided information on any hazard associated in their work area regarding a covered process in Unit # 3 SCR.**

**HAZARD DESCRIPTION:** inhalation hazard/

The employer failed to ensure that contracted workers were provided information of the potential ammonia hazard in SCR Unit # 3 on April 11, 2016. The SCR Unit #3 was being placed back on line following several months of an outage (turnaround project) when an ammonia leak occurred and resulted in 10 contracted worker being exposed to an unknown concentration of ammonia. Workers of NSC were exposed to ammonia while performing assigned duties involving the repairs on the pre heater in SCR Unit # 3- (4th floor). **REFERENCE work order # GPC 560615.** Employees sustained eye, skin, throat, respiratory irritation, coughing from inhalation of the ammonia.

At the time the ammonia was introduced into the system, no information was provided to the contracted workers. An operator failed to close major drain valves on the vaporizer units that resulted in a release of ammonia. Employees were exposed to ammonia while performing assigned operator duties involving the operation of the SCR Unit # 3. Employees sustained eye, skin, throat, respiratory irritation, coughing from inhalation of the ammonia.

**EQUIPMENT:** The employer failed to inform contracted workers of an ammonia hazard in their work area.

**LOCATION:** Georgia Power Company, SCR Unit #3, 317 Covered Bridge Road, Euaharlee, Georgia

**INJURY:** May result in eye, skin, throat and respiratory irritation; At 300 PPM may result in IDLH; May result in asphyxiation; May result in immediate death.

**SEVERITY:** HIGH: Exposure to ammonia can and may result in serious respiratory injury: 300 PPM can result in IDLH: No alarm or sensor was maintained near the contracted workers on the 4<sup>th</sup> floor and it could not be determine what their exposure level actually was. However, the symptoms described during the interview suggested they experienced levels that correspond to at least 300-400 PPM. Several of the individual was still experiencing difficulties after a week had past. One individual had asthma and was experiencing symptoms during his interview.

**PROBABILITY:** GREATER: Ammonia is dangerous and very toxic when inhaled. The likely hood of an occurrence is great because of the failures found during the inspection process in regards to contracted workers. Operators failed to conduct the appropriate checks and follow procedures resulting in the contracted workers being exposed.

**EMPLOYER KNOWLEDGE:** Yes. The company's work order clearly indicated that the unit was not in operations. A breakdown in communication existed between

contractor and the Georgia Power. CSHO could not obtain the specifics. The only information provided was they didn't know. **REFERENCE APPEWNDIX A-4.** The company was implementing Process Safety Management to include, incident investigations of near misses and incidents that may occur at a result of ammonia. The company maintains a PSM inspection team in which perform the duties and oversite of the ammonia system to ensure procedures, training, and all aspect of compliance are maintained. The company has had a number of OSHA inspections in the past that resulted in serious violation of OSHA's standards.

**EMPLOYER/EMPLOYEE INFORMATION:**

Employer, contracted employer and contracted employees established and confirmed that they were not aware that the unit was in startup mode nor were they aware that ammonia was involved.

**CLOSING CONFERENCE:** At the closing conference, CSHO recommended that the company ensure that contracted workers are informed of any hazardous condition regarding a covered process is provided to them prior to the start of the work they would be conducting in a covered process.

(b) (4)

(b) (4)

(b) (4)

Additional names not identified

(b) (7)(D)

(b) (7)(D)

AMMONIA EXPOSURE

DATE INCIDENT OCCURRED: 4/11/16

TIME INCIDENT OCCURRED: 16:32

(b) (7)(D)

EMPLOYEES AFFECTED:

THESE WERE ALL FIRST AIDS ONLY

(b) (7)(D)

All employees received treatment on 4/11/16 of eye drops, cold bottles of water, and lungs and throats were checked. All employees returned on 4/12/16 for a checkup. After 4/12/16, only three employees continued follow ups:

(b) (7)(D)

<b>Proposed Penalty Justification:</b>	
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### Abatement Details

<b>Days to Abate</b>	10 Wkg Days	<b>Abatement Status</b>	
<b>User-entered Abatement Due Date</b>		<b>Date Abated</b>	
<b>Abatement Documentation Required?</b>	Yes	<b>Date Verified</b>	
<b>Abatement Completed Description:</b>			

### MultiStep Abatement

<b>Type/Other Type</b>	<b>Days to abate</b>	<b>User entered Abatement Due Date</b>	<b>Completed(status)</b>	<b>Verify Date</b>

### Employee Exposure

Exposure Instance	No. Exposed	Employer	Name and Address Telephone Numbers	Duration	Frequency	Proximity
a	7	Georgia Power Company	(b) (7)(D)	5.00 month	daily	
a	7	Georgia Power Company	(b) (7)(D)	5.00 month	daily	
a	7	Georgia Power Company	(b) (7)(D)	5.00 month	daily	
a	7	Georgia Power Company	(b) (7)(D)	5.00 month	daily	

a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	
a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	
a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	

20. **Instance Description:**      A. Hazard    B. Equipment    C. Location    D. Injury/Illness    E. Measurements

a) **Hazards-Operation/Condition-Accident:**

b) **Equipment:**

c) **Location:**

d) **Injury/Illness (and Justifications for Severity and Probability):**

e) **Measurements:**

23. **Employer Knowledge:**

24. **Comments:**

25. **Other Employer Information:**

U.S. Department of Labor  
Occupational Safety and Health Administration

**Violation Worksheet**

Print Date : 10/05/2016

				<b>Inspection Number</b>	1143241
				<b>Opt. Insp. Number</b>	1362
<b>Establishment Name</b>	Georgia Power Company				
<b>DBA Name</b>					
<b>Type Of Violation</b>	Serious	<b>Citation Number</b>	1	<b>Item/Group</b>	4 /
<b>Number Exposed</b>	7	<b>No. Instances</b>	1	<b>REC</b>	Complaint
<b>Special Enforcement?</b>				<b>Employer's Relationship to Hazard</b>	All
<b>Standard</b>	1910.119(m)(3)				
<b>Substance Codes</b>	Ammonia		<b>Photo/Video Number</b>		
<b>Alleged Violation Description</b>	<p>29 CFR 1910.119(m)(3): An incident investigation team shall be established and consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident.</p> <p>a). Georgia Power-Plant Bowen: SCR Unit #3: The employer failed to include contractor(s) in their PSM team investigation of an ammonia release.</p> <p>On or about April 11, 2016 during startup of SCR Unit # 3, the vaporization drain/vent valves were not appropriate closed resulting in an ammonia release and exposing approximately 10 contracted workers to ammonia vapors. Contracted workers were ammonia inhalation hazard causing eye, respiratory, throat and other affected conditions to occur.</p>				
<b>Recommended Abatement Action</b>					

**Penalty**

<b>Severity</b>	High		
<b>Severity Justification</b>	Exposure to ammonia may result in serious inhalation injury; even death		
<b>Probability</b>	Greater		
<b>Probability Justification</b>	Leaks/ Releases occur periodically ; lack of operating procedures being implement compromise the safety and health of workers		
<b>Gravity</b>	High	<b>Size</b>	0%
<b>Gravity based Penalty</b>	12471.00	<b>Good Faith</b>	0%
<b>Num Times Repeated</b>		<b>History</b>	0%
<b>Multiplier</b>	1	<b>Quick Fix</b>	0%
<b>Calculated Penalty</b>	12471.00	<b>Proposed Penalty</b>	12471.00

**Georgia Power Company**  
**INSPECTION # 1143241**  
**INCIDENT REPORT**  
**1910.119 (m)(3)**

**The employer failed to ensure that a contracted employer participated in the investigation of an ammonia release occurring that resulted in 10 contracted being exposed to ammonia in the SCR Unit #3.**

**HAZARD DESCRIPTION:** inhalation hazard/

The employer failed to ensure that an incident occurring on April 11, 2016 was investigated utilizing the contracted employer. The SCR Unit #3 was being placed back on line following several months of an outage (turnaround project) when an ammonia leak occurred and resulted in 10 contracted worker being exposed to an unknown concentration of ammonia. Workers of NSC were exposed to ammonia while performing assigned duties involving the repairs on the pre heater in SCR Unit # 3- (4th floor).

**REFERENCE work order # GPC 560615.** Employees sustained eye, skin, throat, respiratory irritation, coughing from inhalation of the ammonia.

At the time the ammonia was introduced into the system, no drain valve verification check and/or inspection was conducted on Vaporizer A and Vaporizer B prior to the start of the ammonia into the process. The operator failed to close major drain valves on the vaporizer units that resulted in a release of ammonia. Employees were exposed to ammonia while performing assigned operator duties involving the operation of the SCR Unit # 3. On or about April 11, 2016 (10) contracted workers were exposed to ammonia while performing assigned involving the repairs on the pre heater in SCR Unit # 3- (4th floor)( **REFERENCE work order # GPC 560615.** Employees sustained eye, skin, throat, respiratory irritation, coughing from inhalation of the ammonia.

**EQUIPMENT:** The employer failed to include contractors in the investigation of an ammonia leak that occurred in SCR Unit # 3.

**LOCATION:** Georgia Power Company, SCR Unit #3, 317 Covered Bridge Road, Euaharlee, Georgia

**INJURY:** May result in eye, skin, throat and respiratory irritation; At 300 PPM may result in IDLH; May result in asphyxiation; May result in immediate death.

**SEVERITY:** HIGH: Exposure to ammonia can and may result in serious respiratory injury: 300 PPM can result in IDLH: No alarm or sensor was maintained near the contracted workers on the 4<sup>th</sup> floor and it could not be determine what their exposure level actually was. However, the symptoms described during the interview suggested they experienced levels that correspond to at least 300-400 PPM. Several of the individual was still experiencing difficulties after a week had past. One individual had asthma and was experiencing symptoms during his interview.

**PROBABILITY:** GREATER: Ammonia is dangerous and very toxic when inhaled. The likely hood of an occurrence is great because of the failures found during the inspection process in regards to contracted workers. Employees were not implementing operational protocol as called for in 2141.800.

**EMPLOYER KNOWLEDGE:** Yes. The company incident report did not include a contracted employer personnel on the investigation team. **REFERENCE APPENDIX A-4.** The company's August, 2015 audit findings specifically addressed the necessity of a contractor being included in investigations involving contractors that may be involved in an onsite incident. **REFERENCE Audit August 2016 item # 125.** The company was implementing Process Safety Management to include, incident investigations of near misses and incidents that may occur at a result of ammonia. The company maintained information and a copy of the standard that specifically required the inclusion of contractors that may and/or could be affected by an exposure to ammonia. The company maintains a PSM inspection team in which perform the duties and oversite of the ammonia system to ensure procedures, training, and all aspect of compliance are maintained. Mr. Jeff Pajor, Process Safety Compliance Manager indicated that the investigation of the incident occurring on 04/11/2016 did not comprise of the contractors. The company has had a number of OSHA inspections in the past that resulted in serious violation of OSHA's standards.

**EMPLOYER/EMPLOYEE INFORMATION:**

Employer and contracted employer both confirmed that no joint effort was made to investigate the incident. Upon request for the operation procedure the company initially provided

**CLOSING CONFERENCE:** At the closing conference, CSHO recommended that the company include contracted employers in the investigation when a near misses and/or incident occurs which may have or affected contracted workers in the area to avoid future situations from occurring.

**Proposed Penalty  
Justification:**

company previous issues serious violations

### Abatement Details

<b>Days to Abate</b>	10 Wkg Days	<b>Abatement Status</b>	
<b>User-entered Abatement Due Date</b>		<b>Date Abated</b>	
<b>Abatement Documentation Required?</b>	Yes	<b>Date Verified</b>	
<b>Abatement Completed Description:</b>			

### MultiStep Abatement

<b>Type/Other Type</b>	<b>Days to abate</b>	<b>User entered Abatement Due Date</b>	<b>Completed(status)</b>	<b>Verify Date</b>

### Employee Exposure

<b>Exposure Instance</b>	<b>No. Exposed</b>	<b>Employer</b>	<b>Name and Address Telephone Numbers</b>	<b>Duration</b>	<b>Frequency</b>	<b>Proximity</b>
a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	
a	7	Georgia Power Company		60.00 month	daily	
a	7	Georgia Power Company		6.00 month	daily	

a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	
a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	
a	7	Georgia Power Company	(b) (7)(D)	6.00 month	daily	

20. **Instance Description:**      A. Hazard    B. Equipment    C. Location    D. Injury/Illness    E. Measurements

a) **Hazards-Operation/Condition-Accident:**

b) **Equipment:**

c) **Location:**

d) **Injury/Illness (and Justifications for Severity and Probability):**

e) **Measurements:**

23. **Employer Knowledge:**

24. **Comments:**

25. **Other Employer Information:**

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

Sampling

# Direct Reading Report

## U.S. Department of Labor Occupational Safety and Health Administration

Fri, Sep 30, 2016 10:20 AM

<b>Reporting ID</b>	<b>Activity/Visit Number</b>	<b>OIS Exposure Record Number</b>	<b>OIS Sampling Sheet Number</b>	
0418200	1143241	231784	251066	
<b>Establishment Name</b>		<b>CSHO/Consultant Id</b>	<b>Sampling Date</b>	
Georgia Power Company		(b) (7)(C)	09/28/2016	
<b>CSHO/Consultant Signature</b>		<b>Exposure Information</b>	<b>Number</b>	<b>Duration</b>
				6 month
<b>Employee (Name, Address, Telephone Number) or Area Information</b>			<b>Exposure Frequency</b>	
Unit 3			Daily	
<b>Job Title</b>	<b>Occupation Code</b>	<b>Weather Conditions</b>	<b>Photo(s)</b>	
Operators				
		<b>Interferences</b>		
<b>PPE (Type and Effectiveness)</b>				
<b>PPE Category</b>	<b>PPE Subcategory</b>	<b>PPE Effectiveness</b>	<b>Worn?</b>	<b>Description</b>

<b>Engineering Controls</b>				
<b>Control Category</b>	<b>Control Subcategory</b>	<b>Used?</b>	<b>Control Effectiveness</b>	<b>Description</b>

<b>Job Description, Operation, Work Location(s) and Ventilation</b>
Contracted workers were performing pipe fitting and other activities on the boiler on the 4 th floor of unit 3. Operators were performing boiler checks and control room monitoring on Unit 3

<b>Sampling Data</b>					
<b>Sampling Type</b>	Personal	<b>Sample Purpose</b>	Exposure assessment	<b>Sample Status</b>	Final
<b>Sample Devices</b>					
<b>Analyze Samples for: (Indicate Which Samples to Include in Calculations)</b>					
<b>Substance Code</b>	<b>Substance Description</b>				
0170	Ammonia				

<b>Direct Reading Data</b>			
<b>Total Time</b>	<b>Reading</b>	<b>Units</b>	<b>Location &amp; Remarks</b>
12:00:00 am	0	parts per million	vaporizer unit on Unit 3

<b>Exposure Summary</b>													
<b>Total Time</b>	<b>Read Out Value</b>	<b>Read Out Unit</b>	<b>OEL Value</b>	<b>OEL Unit</b>	<b>Severity</b>	<b>Citation Information</b>							
						No Cit	FTA	Over Exp	Eng	PPE	Tmg.	Med	Other

Exposure Summary												

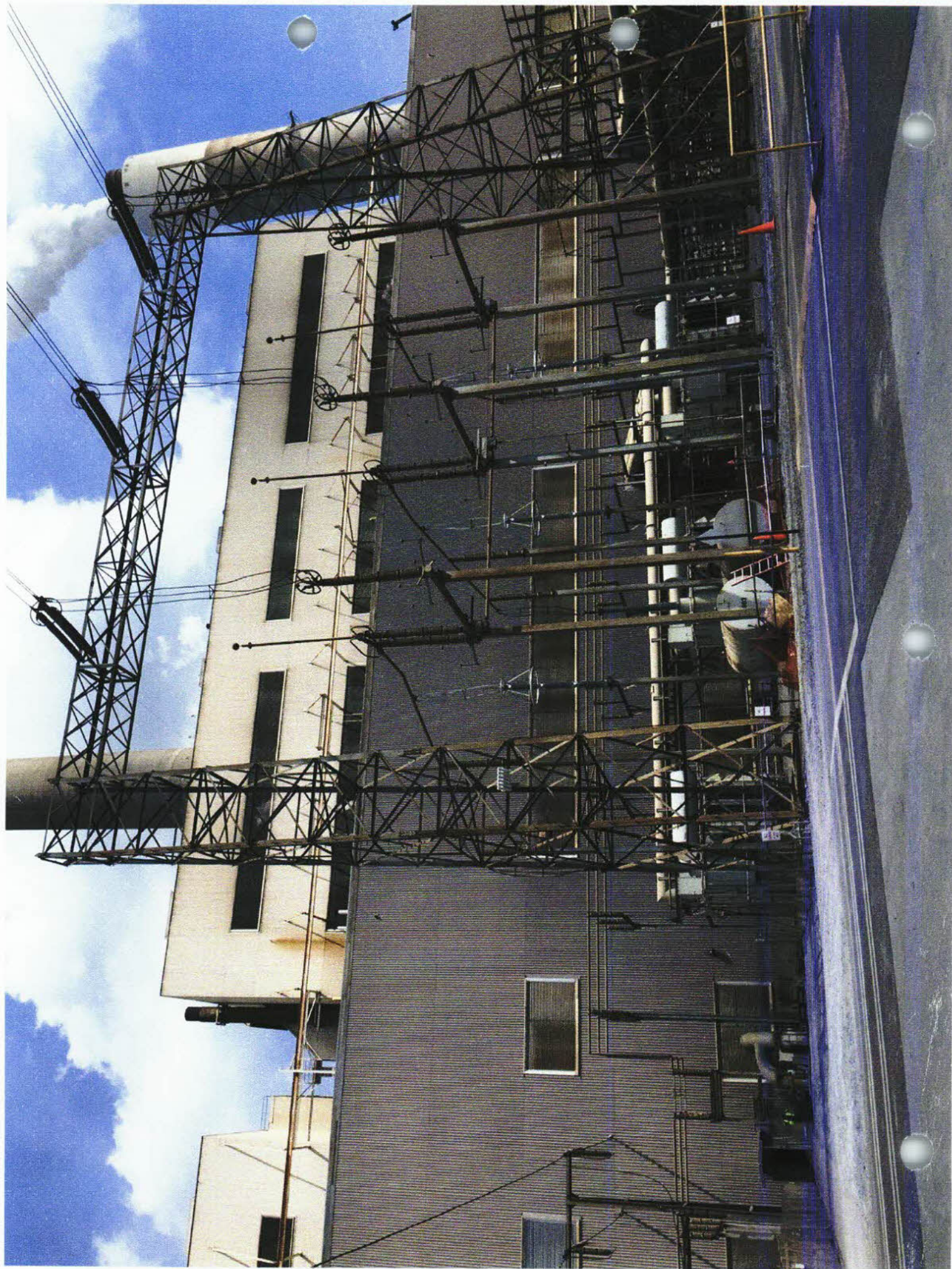
Additives(Enter Line Numbers for those agents contributing to additive effect.)		
Total Number of Lines	Case File Page	of

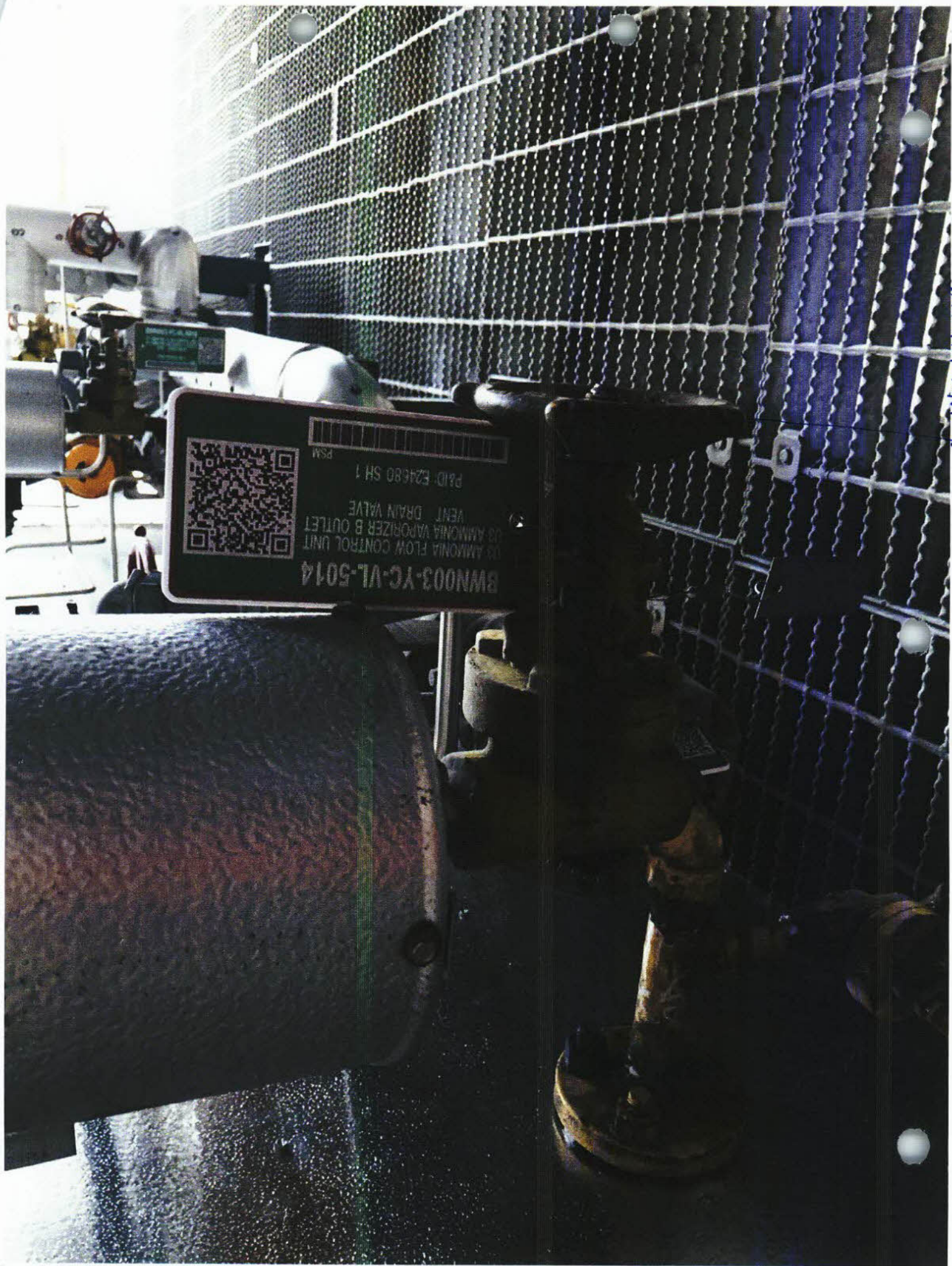
I N S T R U M E N T 1	Pre-Sampling Calibration Records			Post-Sampling Calibration Records		
	Instrument(Type, Mfg. Model No., SN)		Results	Calibration Source		Location
	Location/T & BP	Calibration Source		Results		
	Initials	Date/Time		Initials	Date/Time	

Photos



Long  
Shan





Valve test report



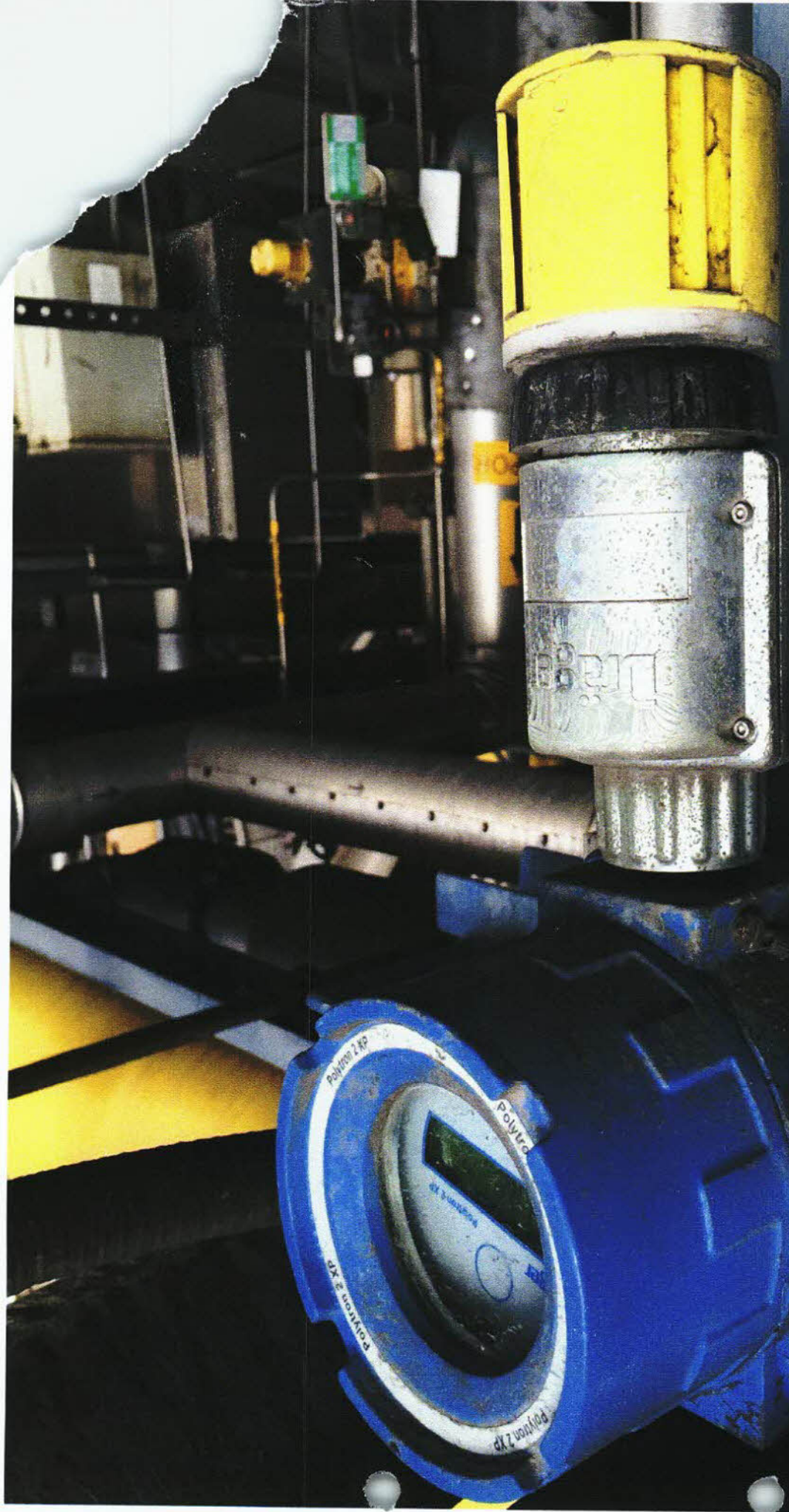




Contractor  
Rep



Sensor - lower



**BWN003-YC-AE-5000**  
U3 AMMONIA FLOW CONTROL UNIT  
U3 AMMONIA VAPORIZATION SKID  
AMMONIA LEAK DETECTOR

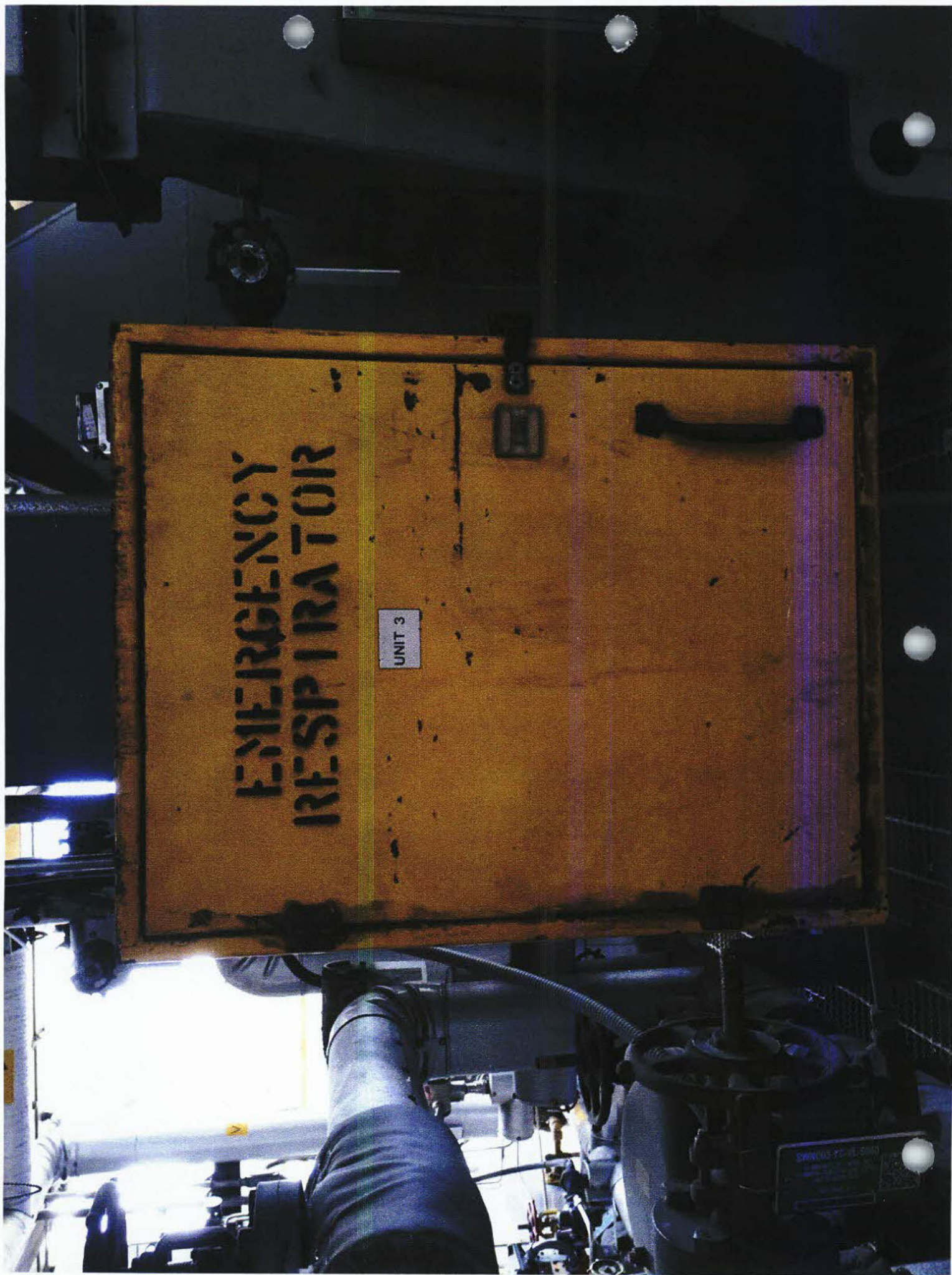
P&ID: E24680 SH 1

PSM









History



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## Inspection Detail

**Case Status: CLOSED**

**Inspection: 900009.015 - Georgia Power Company**

**Inspection Information - Office: Atlanta West**

Nr: 900009.015 Report ID: 0418200 Open Date: 04/10/2013

Georgia Power Company  
317 Covered Bridge Rd Sw  
Cartersville, GA

Union Status: Union

SIC:

NAICS: 221112/Fossil Fuel Electric Power Generation

Mailing: 317 Covered Bridge Rd. Swplant Bowen, Cartersville, GA 30120

Inspection Type:	Referral			
Scope:	Partial	Advanced Notice:	N	
Ownership:	Private			
Safety/Health:	Safety	Close Conference:	09/23/2013	
Emphasis:	L:Fall	Close Case:	03/04/2016	
Related Activity:	Type	ID	Safety	Health
	Referral	822152	Yes	

**Case Status: CLOSED**

### Violation Summary

	Serious	Willful	Repeat	Other	Unclass	Total
Initial Violations	16					16
Current Violations	9			2		11
Initial Penalty	\$119,000					\$119,000
Current Penalty	\$56,000					\$56,000
FTA Amount						

### Violation Items

	#	ID	Type	Standard	Issuance	Abate	Curr\$	Init\$	Fta\$	Contest	LastEvent
Deleted	1.	01001	Serious	19100103 B01 II B	09/24/2013	11/06/2013	\$0	\$7,000	\$0	11/04/2013	F - Formal Settlement
	2.	01002A	Other	19100103 B05	09/24/2013	11/06/2013	\$0	\$7,000	\$0	11/04/2013	F - Formal Settlement
	3.	01002B	Other	19100269 D06 VI	09/24/2013	10/24/2013	\$0	\$7,000	\$0	11/04/2013	F - Formal Settlement
	4.	01003A	Serious	19100269 C	09/24/2013	10/24/2013	\$7,000	\$7,000	\$0	11/04/2013	F - Formal Settlement
	5.	01003B	Serious	19100269 C	09/24/2013	10/24/2013	\$0	\$7,000	\$0	11/04/2013	F - Formal Settlement
Deleted	6.	01005	Serious	19100269 D02 II B	09/24/2013	11/06/2013	\$0	\$7,000	\$0	11/04/2013	F - Formal Settlement

## Inspection Detail

Page 2 of 1

Deleted	9.	<b>01007A</b>	Serious	19100269 D02 IV	09/24/2013	11/06/2013	\$0	\$7,000	\$0	11/04/2013	F - Formal Settlement
Deleted	10.	<b>01008</b>	Serious	19100269 D02 IV C	09/24/2013	10/24/2013	\$0	\$7,000	\$0	11/04/2013	F - Formal Settlement
	11.	<b>01009</b>	Serious	19100269 D02 IV D	09/24/2013	01/30/2015	\$7,000	\$7,000	\$0	11/04/2013	F - Formal Settlement
Deleted	12.	<b>01010</b>	Serious	19100269 D02 V	09/24/2013	10/24/2013	\$0	\$7,000	\$0	11/04/2013	F - Formal Settlement
	13.	<b>01011</b>	Serious	19100269 D02 V E	09/24/2013	10/24/2013	\$7,000	\$7,000	\$0	11/04/2013	F - Formal Settlement
	14.	<b>01012</b>	Other	19100269 D03 II	09/24/2013	11/06/2013	\$0	\$7,000	\$0	11/04/2013	F - Formal Settlement
	15.	<b>01013</b>	Serious	19100269 D06 II	09/24/2013	10/24/2013	\$7,000	\$7,000	\$0	11/04/2013	F - Formal Settlement
	16.	<b>01014B</b>	Serious	19100269 D06 VII	09/24/2013	11/06/2013	\$0	\$0	\$0	11/04/2013	F - Formal Settlement
	17.	<b>01015</b>	Serious	19100269 D07 IV	09/24/2013	10/24/2013	\$7,000	\$7,000	\$0	11/04/2013	F - Formal Settlement
	18.	<b>01016</b>	Serious	19100269 D08 II C	09/24/2013	10/24/2013	\$7,000	\$7,000	\$0	11/04/2013	F - Formal Settlement
	19.	<b>01017</b>	Serious	19100269 V10 I	09/24/2013	11/06/2013	\$7,000	\$7,000	\$0	11/04/2013	F - Formal Settlement

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## Inspection Detail

## Case Status: VIOLATIONS UNDER CONTEST

**Note:** The following inspection has not been indicated as closed. Please be aware that the information shown may change, e.g. violations may be added or deleted. For open cases, in which a citation has been issued, the citation information may not be available for 5 days following receipt by the employer for Federal inspections or for 30 days following receipt by the employer for State inspections.

## Inspection: 1102415.015 - Georgia Power Company

## Inspection Information - Office: Atlanta West

Nr: 1102415.015 Report ID: 0418200 Open Date: 10/27/2015

Georgia Power Company

317 Covered Bridge Rd. Swplant Bowen  
Cartersville, GA 30120

Union Status: Union

SIC:

NAICS: 221112/Fossil Fuel Electric Power Generation

Mailing: 317 Covered Bridge Rd. Swplant Bowen, Cartersville, GA 30120

Inspection Type:	Referral			
Scope:	Partial	Advanced Notice:	N	
Ownership:	Private			
Safety/Health:	Safety	Close Conference:	04/18/2016	
		Close Case:		
Related Activity:	Type	ID	Safety	Health
	Referral	1032779	Yes	

## Case Status: VIOLATIONS UNDER CONTEST

## Violation Summary

	Serious	Willful	Repeat	Other	Unclass	Total
Initial Violations	5		2	2		9
Current Violations	5		2	2		9
Initial Penalty	\$35,000		\$77,000			\$112,000
Current Penalty	\$35,000		\$77,000			\$112,000
FTA Amount						

## Violation Items

#	ID	Type	Standard	Issuance	Abate	Curr\$	Init\$	Fta\$	Contest	LastEvent
1.	01001A	Serious	19100269 A03 III	04/26/2016	06/13/2016	\$7,000	\$7,000	\$0	05/16/2016	-
2.	01001B	Serious	19100269 D08 IV	04/26/2016	06/13/2016	\$0	\$0	\$0	05/16/2016	-
3.	01002A	Serious	19100269 D02 III	04/26/2016	06/13/2016	\$7,000	\$7,000	\$0	05/16/2016	-

## Inspection Detail

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6.	<b>01004A</b>	Serious	19100269 D08 II	04/26/2016	06/13/2016	\$7,000	\$7,000	\$0	05/16/2016	-
7.	<b>01004B</b>	Serious	19100269 D08 II B	04/26/2016	06/13/2016	\$0	\$0	\$0	05/16/2016	-
8.	<b>01005</b>	Serious	19100269 N06 I	04/26/2016	06/13/2016	\$7,000	\$7,000	\$0	05/16/2016	-
9.	<b>02001</b>	Repeat	19100269 D02 IV B	04/26/2016	06/13/2016	\$38,500	\$38,500	\$0	05/16/2016	-
10.	<b>02002</b>	Repeat	19100269 D06 VII	04/26/2016	06/13/2016	\$38,500	\$38,500	\$0	05/16/2016	-
11.	<b>03001</b>	Other	19100269 D02 II C	04/26/2016	06/13/2016	\$0	\$0	\$0	05/16/2016	-
12.	<b>03002</b>	Other	19100269 D08 III	04/26/2016	06/13/2016	\$0	\$0	\$0	05/16/2016	-

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## Inspection Detail

### Case Status: OPEN

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### Inspection: 1134884.015 - Georgia Power Company

#### Inspection Information - Office: Atlanta West

Nr: 1134884.015 Report ID: 0418200 Open Date: 03/08/2016

Georgia Power Company

317 Covered Bridge Rd. Swplant Bowen  
Cartersville, GA 30120

Union Status: Union

SIC:

NAICS: 221112/Fossil Fuel Electric Power Generation

Mailing: 317 Covered Bridge Rd. Swplant Bowen, Cartersville, GA 30120

Inspection Type: Unprog Rel

Scope: Partial Advanced Notice: N

Ownership: Private

Safety/Health: Safety Close Conference: 07/14/2016

Close Case:

### Case Status: OPEN

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[http://www.osha.gov/pls/imis/establishment.inspection\\_detail?id=1134884.015](http://www.osha.gov/pls/imis/establishment.inspection_detail?id=1134884.015)

8/17/2016

DOLPOWER000179



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## Establishment Search Results

Establishment	Date Range	Office	State
Georgia Power	08/17/2011 to 08/17/2016	all	all

*Please note that inspections which are known to be incomplete will have the identifying Activity Nr shown in italic. Information for these open cases is especially dynamic, e.g., violations may be added or deleted.*

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By Date

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#	Activity	Opened	RID	St	Type	Sc	SIC	NAICS	Vio	Establishment Name
<input type="checkbox"/>	1	<i>1143241.015</i>	04/27/2016	0418200	GA	Complaint	Partial	221112		Georgia Power Company
<input type="checkbox"/>	2	<i>1134884.015</i>	03/08/2016	0418200	GA	Unprog Rel	Partial	221112		Georgia Power Company
<input type="checkbox"/>	3	<i>1102415.015</i>	10/27/2015	0418200	GA	Referral	Partial	221112	9	Georgia Power Company
<input type="checkbox"/>	4	900009.015	04/10/2013	0418200	GA	Referral	Partial	221112	10	Georgia Power Company

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PMS- Incident Report

Haz Com  
SDS-NH<sub>3</sub>

(b) (4)

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(b) (4)

In accordance with the requirement set forth in 1910.119(d)(3)(ii), all process equipment complies with recognized and generally accepted good engineering practices. The RAGAGEPs for Plant Bowen's anhydrous ammonia system are ANSI K61.1 and 29 CFR 1910.111.

(b) (4)

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## Data Sheet

This data sheet is a sensor specific supplement to the "Instructions for Use" of the respective transmitter.  
Please consult in any event the "Instructions for Use" of the transmitter.

## Intended Use

The DrägerSensor® NH<sub>3</sub> HC is an electrochemical three electrode sensor for the continuous real-time monitoring of ammonia (NH<sub>3</sub>) gas in ambient air. The accuracy of measurement for the sensor is given for the short-term presence of NH<sub>3</sub> gas. Because of the electrochemical reaction in the sensor, its measurement sensitivity changes as exposure to NH<sub>3</sub> gas concentration **continues**. For 500 ppm NH<sub>3</sub> gas there may be an increase in the measuring signal of about 20 % or a reduction of about 10 % over a period of one hour. For lower concentrations of NH<sub>3</sub> gas the percentage change in the measuring signal may be less.

The sensor is designed to be used only in conjunction with a Dräger transmitter (e. g. Polytron 2).

## Technical Data

Electrode reactions (shown for NH <sub>3</sub> )	Measuring electrode: $\text{NH}_3 \rightarrow \frac{1}{2} \text{N}_2 + 3 \text{H}^+ + 3 \text{e}^-$ Counter electrode: $\frac{3}{4} \text{O}_2 + 3 \text{H}^+ + 3 \text{e}^- \rightarrow \frac{3}{2} \text{H}_2\text{O}$
Measuring gas:	NH <sub>3</sub>
Measuring range:	
minimum	300 ppm
default	1000 ppm
maximum	1000 ppm
Calibration interval: *	
minimum	1 day
default	6 months
maximum	12 months
Ambient conditions:	
Operation	-40 °C to 65 °C (-40 °F to 150 °F) 700 hPa to 1300 hPa (20.7" Hg to 38.4" Hg at 32 °F) 15 % r.h. to 95 % r.h., non condensing
Storage	0 °C to 40 °C (30 °F to 105 °F) 700 hPa to 1300 hPa (20.7" Hg to 38.4" Hg at 32 °F) 30 % r.h. to 70 % r.h., non condensing
Expected sensor life	> 24 months
Lower detection limit **	30 ppm
Linearity tolerance	≤ ± 3 % of measured value
Repeatability:	
zero	≤ ± 10 ppm
sensitivity	≤ ± 5 % of measured value
Effect of temperature:	
zero -40 °C to 20 °C (-40 °F to 70 °F)	≤ ± 0.1 ppm / K
20 °C to 65 °C (70 °F to 150 °F)	≤ ± 1 ppm / K
sensitivity	≤ ± 5 % of measured value
Effect of pressure:	
zero	no effect
sensitivity	≤ ± 0.1 % of measured value / hPa
Effect of humidity:	
zero	≤ ± 0.5 ppm / % r.h.
sensitivity	≤ ± 0.1 % of measured value / % r.h.
Effect of flow between 0 and 6 m/s (0 and 1180 ft/min):	
zero	no effect
sensitivity	≤ ± 3 % of measured value
Long-term drift:	
zero	≤ ± 10 ppm / month
sensitivity	≤ ± 5 % of measured value / month
Response time $t_{0...50}$ **	≤ 30 seconds
Warm-up time:	
Sensor ready for operation after ***	≤ 2 hours
Sensor ready for calibration after ****	≤ 11 hours

® DrägerSensor is a trademark of Dräger, registered in Germany.

\* Only applicable when used in conjunction with Polytron 2 or Polytron 2 XP.

\*\* At 25 °C (77 °F), 1013 hPa (29.2" Hg at 32 °F), 50 % r.h.

\*\*\* At this time, the actual zero point error of the sensor is less than 4 times the value stated in this data sheet.

\*\*\*\* At this time, the sensor has reached its specific accuracy.

## Cross Sensitivities

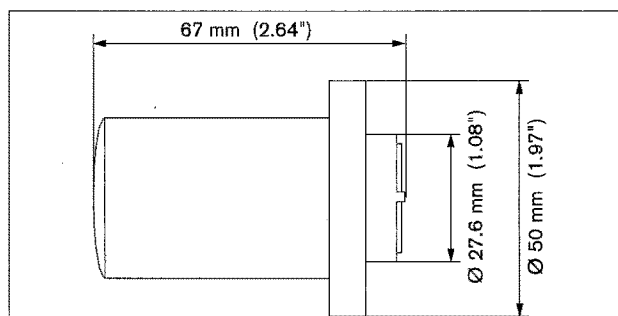
The table shows the response of the sensor to other gases than target gas (cross sensitivities). The values are typical and apply to new sensors. The table does not claim to be complete. Gas mixtures can be displayed as the sum of all components. Gases with negative cross sensitivity may displace a positive reading of the sensor.

Gas / Vapor	Chemical Symbol	Gas concentration	Displayed value in ppm NH <sub>3</sub>
Acetaldehyde	CH <sub>3</sub> CHO	55 ppm	≤ 10
Acryl nitrile	H <sub>2</sub> C=CH-CN	80 ppm	no effect
Arsine	AsH <sub>3</sub>	3 ppm	≤ 10
Boron trifluoride	BF <sub>3</sub>	15 ppm	no effect
Butadiene	CH <sub>2</sub> CHCHCH <sub>2</sub>	50 ppm	no effect
Tert-Butylmercaptane	(CH <sub>3</sub> ) <sub>3</sub> CSH	5 ppm	≤ 5
Carbon dioxide	CO <sub>2</sub>	1.5 % by vol.	≤ 10 (-) *
Carbon monoxide	CO	100 ppm	≤ 5
Chlorine	Cl <sub>2</sub>	10 ppm	≤ 10 (-) *
1,1-Dichloroethane	C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	50 ppm	no effect
Diethyl ether	(C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> O	400 ppm	no effect
Disilane	Si <sub>2</sub> H <sub>6</sub>	10 ppm	≤ 5
Epichlorohydrin	C <sub>2</sub> H <sub>3</sub> OCH <sub>2</sub> Cl	35 ppm	≤ 5
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	250 ppm	≤ 5
Ethene	C <sub>2</sub> H <sub>4</sub>	1 000 ppm	no effect
Ethine	C <sub>2</sub> H <sub>2</sub>	200 ppm	no effect
Ethylene oxide	C <sub>2</sub> H <sub>4</sub> O	20 ppm	≤ 5
Formaldehyde	HCHO	45 ppm	≤ 25
Hydrogen	H <sub>2</sub>	1 000 ppm	≤ 5
Hydrogen bromide	HBr	100 ppm	no effect
Hydrogen cyanide	HCN	50 ppm	≤ 5
Hydrogen selenide	SeH <sub>2</sub>	5 ppm	≤ 10
Hydrogen sulfide	H <sub>2</sub> S	100 ppm	≤ 500
Methane	CH <sub>4</sub>	2 % by vol.	no effect
Methanol	CH <sub>3</sub> OH	500 ppm	no effect
Methylmethacrylate	CH <sub>2</sub> C(CH <sub>3</sub> )COOCH <sub>3</sub>	60 ppm	≤ 5
Nitrogen dioxide	NO <sub>2</sub>	50 ppm	≤ 50 (-) *
Nitrogen monoxide	NO	20 ppm	≤ 15
Phosphine	PH <sub>3</sub>	10 ppm	≤ 35
Propane	C <sub>3</sub> H <sub>8</sub>	2 % by vol.	no effect
i-Propanol	(CH <sub>3</sub> ) <sub>2</sub> CHOH	500 ppm	no effect
Propene	C <sub>3</sub> H <sub>6</sub>	50 ppm	no effect
n-Propyl mercaptane	CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> SH	10 ppm	≤ 15
Styrene	C <sub>6</sub> H <sub>5</sub> CHCH <sub>2</sub>	30 ppm	no effect
Sulfur dioxide	SO <sub>2</sub>	20 ppm	≤ 10
Tetrahydrofuran	C <sub>4</sub> H <sub>8</sub> O	60 ppm	no effect
Tetrahydrothiophene	C <sub>4</sub> H <sub>8</sub> S	5 ppm	≤ 10
Vinyl acetate	CH <sub>3</sub> COOCHCH <sub>2</sub>	30 ppm	≤ 5
Vinyl chloride	C <sub>2</sub> H <sub>3</sub> Cl	50 ppm	no effect

(-) \* negative display.

## Order List

DrägerSensor® NH<sub>3</sub> HC ..... 68 09 645  
 Dust filter ..... 68 09 595  
 For the calibration:  
 Calibration adapter ..... 68 06 978  
 Pressure reducer ..... on request  
 Test gas cylinder 99.9 % N<sub>2</sub> (zero gas), 4 L, 200 bar ..... 68 05 113  
 Calibration bottle for calibration with ampoules ..... 68 03 407  
 Test gas ampoule 300 ppm NH<sub>3</sub> ..... 68 07 923



Dräger Safety AG & Co. KGaA – ☒ Revalstraße 1, D-23560 Lübeck, Germany – ☎ +49 451 8 82 - 27 94 – FAX +49 451 8 82 - 49 91  
 ☎ http://www.draeger.com/gds

2nd edition - August 2002  
 Subject to alteration

90 23 460 - TD 4681.350 en/de  
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Sensor location

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# Anhydrous Ammonia

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision Date: September 2015

Version: 1.0

### SECTION 1: IDENTIFICATION

#### Product Identifier

**Product Name:** Anhydrous Ammonia

**Synonyms:** Ammonia

**Intended Use of the Product** Not available

#### Name, Address, and Telephone of the Responsible Party

##### **Company**

Cherokee Nitrogen L.L.C.

1080 Industrial Drive

Cherokee, AL 35616

T (256) 359-7000 – F (256) 359-4450

##### Emergency Telephone Number

**Emergency number** : (256) 359-7000, (800) 424-9300 (CHEMTREC, 24 hours)

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### **Classification (GHS-US)**

Flam. Gas 2 H221

Compressed gas H280

Acute Tox. 3 (Inhalation:gas) H331

Skin Corr. 1B H314

Eye Dam. 1 H318

STOT SE 3 H335

Aquatic Acute 1 H400

Aquatic Chronic 2 H411

#### Label Elements

##### **GHS-US Labeling**

##### **Hazard Pictograms (GHS-US)**



GHS04



GHS05



GHS06



GHS07



GHS09

##### **Signal Word (GHS-US)**

: Danger

##### **Hazard Statements (GHS-US)**

: H221 - Flammable gas

H280 - Contains gas under pressure; may explode if heated

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H331 - Toxic if inhaled

H335 - May cause respiratory irritation

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

##### **Precautionary Statements (GHS-US)**

: P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.

P260 - Do not breathe vapors, mist, spray, gas.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

P273 - Avoid release to the environment.

P280 - Wear gloves, protective clothing, eye protection, face protection, respiratory protection.

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position

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comfortable for breathing.

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor/physician.

P311 - Call a POISON CENTER or doctor/physician

P312 - Call a POISON CENTER/doctor/physician if you feel unwell.

P321 - Specific treatment (see section 4).

P363 - Wash contaminated clothing before reuse

P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 - Eliminate all ignition sources if safe to do so.

P391 - Collect spillage.

P403 - Store in a well-ventilated place.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up.

P410+P403 - Protect from sunlight. Store in a well-ventilated place

P501 - Dispose of contents/container to local, regional, national, territorial, provincial, and international regulations.

### Other Hazards

**Other Hazards Not Contributing to the Classification:** Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Flammable vapors can accumulate in head space of closed systems. Do not puncture or incinerate container.

**Unknown Acute Toxicity (GHS-US)** Not available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Substances

#### Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Ammonia	(CAS No) 7664-41-7	99.5	Flam. Gas 2, H221 Compressed gas, H280 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Water	(CAS No) 7732-18-5	0.4	Not classified

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. If exposed or concerned: Get medical advice/attention. If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call for medical assistance.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. Immediately call for medical assistance. Thaw frosted parts with lukewarm water. Do not rub affected area.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call for medical assistance. If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Immediately call for medical assistance.

### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Toxic if swallowed. Corrosive. Causes burns. May cause frostbite on contact with the liquid. Causes serious eye damage. May cause respiratory irritation.

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**Inhalation:** Toxic if inhaled. May cause respiratory irritation. Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

**Skin Contact:** Corrosive. Causes burns. Contact with the liquid may cause cold burns/frostbite.

**Eye Contact:** Causes serious eye damage. Contact with the liquefied gas causes frostbite.

**Ingestion:** Contact may cause immediate severe irritation progressing quickly to chemical burns. Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** Not available

### **Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention.

## **SECTION 5: FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire. Do not use water directly on liquid ammonia.

### **Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Flammable gas. Will burn in the range of 16-25% in air.

**Explosion Hazard:** May form flammable/explosive vapor-air mixture.

**Reactivity:** Thermal decomposition generates : Corrosive vapors. Toxic Gas. May be corrosive to metals.

### **Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** In case of leaking gas fire, eliminate all ignition sources if safe to do so. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Corrosive vapors. Toxic fumes are released. Nitrogen oxides.

**Other information:** Do not allow run-off from fire fighting to enter drains or water courses. Use water spray to disperse vapors. Do not use water directly on liquid ammonia.

### **Reference to Other Sections**

Refer to section 9 for flammability properties.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Use special care to avoid static electric charges. Eliminate every possible source of ignition. Keep away from heat/sparks/open flames/hot surfaces - No smoking. Do not allow product to spread into the environment. Do NOT breathe (vapors, mist, spray, gas). Do not get in eyes, on skin, or on clothing.

#### **For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### **For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area.

### **Environmental Precautions**

Prevent entry to sewers and public waters. Avoid release to the environment.

### **Methods and Material for Containment and Cleaning Up**

**For Containment:** As an immediate precautionary measure, isolate spill or leak area in all directions. Stop the flow of material, if this is without risk. Use only non-sparking tools. Notify authorities if liquid enters sewers or public waters.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Isolate area until gas has dispersed. Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Contact competent authorities after a spill.

### **Reference to Other Sections**

See section 8, Exposure Controls and Personal Protection.

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### SECTION 7: HANDLING AND STORAGE

#### Precautions for Safe Handling

**Additional Hazards When Processed:** Handle empty containers with care because residual vapors are flammable. Flammable gas. Do not pressurize, cut, or weld containers. When heated to decomposition, emits toxic fumes. Corrosive vapors are released. Copper, silver, cadmium, zinc, alloys, and other reactive metals must not be used in ammonia systems as they can be rapidly corroded. Use only non-sparking tools. Contact with the liquefied gas may cause frostbite.

**Handling Temperature:** < 48.9 °C (<120°F)

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling. Wash contaminated clothing before reuse.

#### Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations. Use explosion-proof electrical, ventilating, and lighting equipment. Copper, silver, cadmium, zinc, alloys, and other reactive metals must not be used in ammonia systems as they can be rapidly corroded.

**Storage Conditions:** Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place. Store locked up. Keep/Store away from extremely high or low temperatures, direct sunlight, heat, ignition sources, incompatible materials.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Halogenated compounds. Halogens (F, Cl, Br, I). Metals. Metal salts. Reactive metals (Al, K, Zn ...). Water in contact with the liquid.

**Storage Temperature:** < 48.9 °C (<120°F)

**Specific End Use(s)** Not available

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control Parameters

Ammonia (7664-41-7)		
Mexico	OEL TWA (mg/m <sup>3</sup> )	18 mg/m <sup>3</sup>
Mexico	OEL TWA (ppm)	25 ppm
Mexico	OEL STEL (mg/m <sup>3</sup> )	27 mg/m <sup>3</sup>
Mexico	OEL STEL (ppm)	35 ppm
USA ACGIH	ACGIH TWA (ppm)	25 ppm
USA ACGIH	ACGIH STEL (ppm)	35 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	35 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	18 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (ppm)	25 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	27 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (STEL) (ppm)	35 ppm
USA IDLH	US IDLH (ppm)	300 ppm
Alberta	OEL STEL (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
Alberta	OEL STEL (ppm)	35 ppm
Alberta	OEL TWA (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
Alberta	OEL TWA (ppm)	25 ppm
British Columbia	OEL STEL (ppm)	35 ppm
British Columbia	OEL TWA (ppm)	25 ppm
Manitoba	OEL STEL (ppm)	35 ppm
Manitoba	OEL TWA (ppm)	25 ppm
New Brunswick	OEL STEL (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
New Brunswick	OEL STEL (ppm)	35 ppm
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
New Brunswick	OEL TWA (ppm)	25 ppm
Newfoundland & Labrador	OEL STEL (ppm)	35 ppm
Newfoundland & Labrador	OEL TWA (ppm)	25 ppm
Nova Scotia	OEL STEL (ppm)	35 ppm

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Nova Scotia	OEL TWA (ppm)	25 ppm
Nunavut	OEL STEL (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
Nunavut	OEL STEL (ppm)	35 ppm
Nunavut	OEL TWA (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
Nunavut	OEL TWA (ppm)	25 ppm
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (ppm)	35 ppm
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (ppm)	25 ppm
Ontario	OEL STEL (ppm)	35 ppm
Ontario	OEL TWA (ppm)	25 ppm
Prince Edward Island	OEL STEL (ppm)	35 ppm
Prince Edward Island	OEL TWA (ppm)	25 ppm
Québec	VECD (mg/m <sup>3</sup> )	24 mg/m <sup>3</sup>
Québec	VECD (ppm)	35 ppm
Québec	VEMP (mg/m <sup>3</sup> )	17 mg/m <sup>3</sup>
Québec	VEMP (ppm)	25 ppm
Saskatchewan	OEL STEL (ppm)	35 ppm
Saskatchewan	OEL TWA (ppm)	25 ppm
Yukon	OEL STEL (mg/m <sup>3</sup> )	30 mg/m <sup>3</sup>
Yukon	OEL STEL (ppm)	40 ppm
Yukon	OEL TWA (mg/m <sup>3</sup> )	18 mg/m <sup>3</sup>
Yukon	OEL TWA (ppm)	25 ppm

### Exposure Controls

**Appropriate Engineering Controls:** Gas detectors should be used when flammable gases/vapors may be released. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use explosion-proof equipment. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Ground/bond container and receiving equipment.

**Personal Protective Equipment:** Insufficient ventilation: wear respiratory protection. Protective goggles. Gloves. Protective clothing.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics. Wear fire/flamm resistant/retardant clothing. Corrosion-proof clothing.

**Hand Protection:** Wear chemically resistant protective gloves. Insulated gloves.

**Eye Protection:** Chemical goggles or face shield.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** Use a NIOSH-approved self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Thermal Hazard Protection:** Wear suitable protective clothing.

**Other Information:** When using, do not eat, drink or smoke.

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### Information on Basic Physical and Chemical Properties

Physical State	: Gas
Appearance	: Colorless
Odor	: Pungent
Odor Threshold	: Approximately 5 ppm
pH	: 11.6 (1N Solution of water)
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: -72.72 °C (-107.9°F)
Freezing Point	: Not available
Boiling Point	: -29.9 (-28.1°F)
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: 16 %
Upper Flammable Limit	: 25 %
Vapor Pressure	: 4802.9 mm Hg @15.56°C (60°F)
Relative Vapor Density at 20 °C	: 0.6 @0°C (32°F) Air=1
Relative Density	: Not available
Specific Gravity	: 0.62 @15.56°C (60°F) water=1
Solubility	: High.
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not available
Explosion Data – Sensitivity to Static Discharge	: Not available

### SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Thermal decomposition generates : Corrosive vapors. Toxic Gas. May be corrosive to metals.

**Chemical Stability:** Flammable gas.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Halogenated compounds. Halogens. Reactive metals (Al, K, Zn). Water in contact with the liquid.

**Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>). Thermal decomposition generates : Corrosive vapors. Explosive hydrogen gas. Nitrogen oxides.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### Information on Toxicological Effects - Product

**Acute Toxicity:** Toxic if inhaled.

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Causes severe skin burns and eye damage. pH: 11.6 (1N Solution of water)

**Serious Eye Damage/Irritation:** Causes serious eye damage. pH: 11.6 (1N Solution of water)

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** May cause respiratory irritation.

**Aspiration Hazard:** Not classified

**Potential Adverse Human Health Effects and Symptoms:** Toxic if inhaled.

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**Symptoms/Injuries After Inhalation:** Toxic if inhaled. May cause respiratory irritation. Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

**Symptoms/Injuries After Skin Contact:** Corrosive. Causes burns. Contact with the liquid may cause cold burns/frostbite.

**Symptoms/Injuries After Eye Contact:** Causes serious eye damage. Contact with the liquefied gas causes frostbite.

**Symptoms/Injuries After Ingestion:** Contact may cause immediate severe irritation progressing quickly to chemical burns. Ingestion is likely to be harmful or have adverse effects.

### Information on Toxicological Effects - Ingredient(s)

#### LD50 and LC50 Data:

<b>Water (7732-18-5)</b>	
LD50 Oral Rat	> 90000 mg/kg
<b>Ammonia (7664-41-7)</b>	
LD50 Oral Rat	350 mg/kg
LC50 Inhalation Rat (mg/l)	5.1 mg/l (Exposure time: 1 h)
LC50 Inhalation Rat (ppm)	2000 ppm/4h (Exposure time: 4 h)

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

**Ecology - General:** Very toxic to aquatic life with long lasting effects.

<b>Ammonia (7664-41-7)</b>	
LC50 Fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio)
EC50 Daphnia 1	25.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	0.26 - 4.6 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

### Persistence and Degradability

<b>Anhydrous Ammonia</b>	
Persistence and Degradability	May cause long-term adverse effects in the environment.

### Bioaccumulative Potential

<b>Anhydrous Ammonia</b>	
Bioaccumulative Potential	Not established.
<b>Ammonia (7664-41-7)</b>	
Log Pow	-1.14 (at 25 °C)

**Mobility in Soil** Not available

### Other Adverse Effects

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Additional Information:** Handle empty containers with care because residual vapors are flammable.

**Ecology – Waste Materials:** This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

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### SECTION 14: TRANSPORT INFORMATION

#### 14.1 In Accordance with DOT

Proper Shipping Name : AMMONIA, ANHYDROUS  
Hazard Class : 2.2  
Identification Number : UN1005  
Label Codes : 2.2  
Marine Pollutant : Marine pollutant  
ERG Number : 125



#### 14.2 In Accordance with IMDG

Proper Shipping Name : AMMONIA, ANHYDROUS  
Hazard Class : 2.3  
Identification Number : UN1005  
Label Codes : 2.3,8  
EmS-No. (Fire) : F-C  
EmS-No. (Spillage) : S-U  
Marine pollutant : Marine pollutant



#### 14.3 In Accordance with IATA

Proper Shipping Name : AMMONIA, ANHYDROUS  
Identification Number : UN1005  
Hazard Class : 2  
Label Codes : 2.3,8  
ERG Code (IATA) : 2CP



#### 14.4 In Accordance with TDG

Proper Shipping Name : ANHYDROUS AMMONIA  
Hazard Class : 2.3  
Identification Number : UN1005  
Label Codes : 2.3,8  
Marine Pollutant (TDG) : Marine pollutant



### SECTION 15: REGULATORY INFORMATION

#### US Federal Regulations

<b>Anhydrous Ammonia</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Fire hazard Immediate (acute) health hazard Sudden release of pressure hazard
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Ammonia (7664-41-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 302 (Specific toxic chemical listings)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 302 Threshold Planning Quantity (TPQ)</b>	500
<b>SARA Section 311/312 Hazard Classes</b>	Fire hazard Immediate (acute) health hazard Sudden release of pressure hazard
<b>SARA Section 313 - Emission Reporting</b>	1.0 % (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)

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### US State Regulations

#### Ammonia (7664-41-7)

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute  
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic  
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Connecticut - Water Quality Standards - Acute Freshwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Acute Saltwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - Connecticut - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria  
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities  
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities  
U.S. - Delaware - Accidental Release Prevention Regulations - Toxic Endpoints  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Florida - Essential Chemicals List  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Maine - Air Pollutants - Criteria Pollutants  
U.S. - Massachusetts - Allowable Ambient Limits (AALs)  
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
RTK - U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Threshold Effects Exposure Limits (TELs)  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - STELs  
U.S. - Michigan - Polluting Materials List  
U.S. - Michigan - Process Safety Management Highly Hazardous Chemicals  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - STELs  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)  
U.S. - New Jersey - Water Quality - Ground Water Quality Criteria  
U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)  
U.S. - New Mexico - Precursor Chemicals  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Carolina - Control of Toxic Air Pollutants  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour





# Anhydrous Ammonia

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities  
U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Oregon - Precursor Chemicals  
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
RTK - U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 24-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual  
U.S. - Rhode Island - Water Quality Standards - Acute Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Acute Saltwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Chronic Freshwater Aquatic Life Criteria  
U.S. - Rhode Island - Water Quality Standards - Chronic Saltwater Aquatic Life Criteria  
U.S. - Tennessee - Occupational Exposure Limits - STELS  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - STELS  
U.S. - Virginia - Water Quality Standards - Acute Freshwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Acute Saltwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Chronic Freshwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Chronic Saltwater Aquatic Life  
U.S. - Virginia - Water Quality Standards - Public Water Supply Effluent Limits  
U.S. - Virginia - Water Quality Standards - Surface Waters Not Used for the Public Water Supply Effluent Limits  
U.S. - Washington - Permissible Exposure Limits - STELS  
U.S. - Washington - Permissible Exposure Limits - TWAs  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet  
U.S. - Wyoming - Process Safety Management - Highly Hazardous Chemicals  
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Fresh Water  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Fresh Water  
U.S. - Alaska - Water Quality Standards - Acute Aquatic Life Criteria for Marine Water  
U.S. - Alaska - Water Quality Standards - Chronic Aquatic Life Criteria for Marine Water  
U.S. - Alaska - Ambient Air Quality Standards

### Canadian Regulations

Anhydrous Ammonia				
WHMIS Classification		Class B Division 1 - Flammable Gas Class A - Compressed Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material		
				
Water (7732-18-5)				
Listed on the Canadian DSL (Domestic Substances List) inventory.				
WHMIS Classification		Uncontrolled product according to WHMIS classification criteria		

# Anhydrous Ammonia

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Ammonia (7664-41-7)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

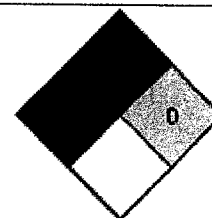
### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision date** : September 2015  
**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

#### GHS Full Text Phrases:

Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Compressed gas	Gases under pressure Compressed gas
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Flam. Gas 2	Flammable gases Category 2
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H221	Flammable gas
H280	Contains gas under pressure; may explode if heated
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H331	Toxic if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

**NFPA Health Hazard** : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.  
**NFPA Fire Hazard** : 1 - Must be preheated before ignition can occur.  
**NFPA Reactivity** : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



#### Party Responsible for the Preparation of This Document

Cherokee Nitrogen L.L.C.  
1080 Industrial Drive  
Cherokee, AL 35616  
T (256) 359-7000

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

North America GHS US 2012 & WHMIS


Who's  
program



## SOUTHERN COMPANY GENERATION

SCG-SH-2101

### Hazard Communication

Revision	Approval Date	Approved by	Title
0	August 9, 2013		Executive Vice President and Chief Production Officer

Program update ???  
needed ...  
Training Safety Team  
B J Wilson

GHS


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## SOUTHERN COMPANY GENERATION

SCG-SH-2101

### Hazard Communication

<i><b>Revision</b></i>	<i><b>Approval Date</b></i>	<i><b>Approved by</b></i>	<i><b>Title</b></i>
0	August 9, 2013		Executive Vice President and Chief Production Officer

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## **1.0 PURPOSE AND SCOPE**

### **1.1 Purpose**

The purpose of this Hazard Communication document is to ensure that Southern Company Generation employees are effectively informed of the potential and existing chemical hazards in the work environment and to comply with the federal Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200).

### **1.2 Scope**

This document applies to all hazardous chemicals that employees could be exposed under normal working conditions or in the case of an emergency. A hazardous chemical is any chemical which is classified as a physical hazard (flammable, explosive, corrosive), health hazard (irritant, toxin, carcinogen), simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

This document does not apply to:

- Hazardous waste.
- Consumer products brought on-site by personnel for personal use (e.g. shaving cream, hair spray, hand lotion)
- Any consumer product or hazardous substance when used for the purpose intended by the manufacturer where the use results in a duration and frequency of exposure not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended.

## **2.0 GENERAL INFORMATION**

This document contains provisions for:

- Labeling of containers of chemicals in the workplace.
- Distribution of Safety Data Sheets (SDSs) to employees.
- Development and implementation of employee training programs regarding hazards of chemicals and protective measures.
- Providing a list of the hazardous chemicals known to be present on site.
- Methods used to inform employees of the hazards of non-routine tasks.
- Hazards associated with chemicals contained in unlabeled pipes.
- Provisions for informing contractors of hazard communication requirements.

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### **3.0 SITE SPECIFIC PROGRAM**

The Company shall develop, implement, and maintain a written hazard communication program containing site-specific information at each workplace that is readily available to employees, their representatives, and regulatory inspectors upon their request. This document along with a completed Appendix I, Required Site-Specific Information, may serve as each site's written hazard communication program. If a site chooses to provide their own written program, it shall contain the provisions presented above in the General Program Information section to be considered complete and in compliance with 29 CFR 1910.1200. In addition, the written program shall clearly state who is responsible for the overall site coordination as well as who is responsible for any of the specific elements.

The written program shall be an accurate representation of what hazardous chemicals exist or are used by employees working for or assigned to the facility. Therefore, it shall be updated whenever changes are made. The site-specific information shall be kept current, and as a matter of good practice, the overall program shall be reviewed periodically.

### **4.0 LABELING AND OTHER FORMS OF WARNING**

#### **4.1 Labels and Containers**

Chemical manufacturers, importers, and distributors shall provide labels, tags, or other markings for containers of hazardous chemicals. Containers of hazardous chemicals shall be inspected upon receipt and if an appropriate label is not present, the chemical shall not be accepted. The information shall include at least the following:

- Product identifier.
- Signal word.
- Hazard statement(s).
- Pictogram(s).
- Precautionary statement(s).
- Name, address, and telephone number of the chemical manufacturer, importer, or responsible party.

#### **4.2 Workplace Labeling**

Although there is no specific format for labeling containers of hazardous chemicals in the workplace, they shall be properly labeled, tagged, or marked with one of the following:

- The information specified on the the manufacturer, importer or distributor container label as described in the section above.
- Product identifier and words, pictures, symbols, or a combination thereof, which provide at least general information regarding the hazards of the chemicals.

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Workplace labels using National Fire Protection Association (NFPA) or Hazardous Material Information System (HMIS) hazard classification systems meet this requirement.

This general information in conjunction with the other information immediately available to employees (for example, SDSs), shall provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

In certain situations involving individual stationary process containers, the label may be replaced by a sign, placard, process sheet, batch ticket, operating procedures, or other means to convey the identity of the hazardous chemical and the appropriate physical and health hazards. If these other forms of warning are used, they shall be readily accessible to employees in their work area during each work shift.

Labels shall not be required for portable containers into which a small amount of a chemical is transferred for immediate use by the person performing the transfer. An example of this exception is the transfer of a few milliliters of a chemical into a container for use in another location when transferred, transported, and fully used by one individual during the work shift.

When needed, chemical product labels shall be manually created or generated electronically. Labeling software packages are readily available as well as some customized labels for a specific chemical. The label on a container shall contain the same chemical or product name as is indicated on the product's SDS contained in the 3E Chemical Inventory System. Site-specific labeling systems shall be described in Attachment I of this program.









- No labels on original containers shall be altered or defaced in any manner. If labels are removed, defaced or become illegible, the container shall be immediately marked with the required information.
- There shall be no requirement to re-label chemicals that are properly labeled by the manufacturer or distributor when they are received. However, if chemicals are received that are not labeled appropriately the Company shall assume the responsibility to label the container. The only chemicals generally excluded from the Hazard Communication labeling requirement are the following:
  - a. Pesticides regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (shall be labeled in accordance with FIFRA).
  - b. Any chemical substance or mixture defined in the Toxic Substances Control Act that are subject to labeling requirements of that Act.
  - c. Foods, drugs, or cosmetics regulated by the Food and Drug Administration (shall be labeled in accordance with FDA regulations).
  - d. Consumer products regulated by the Consumer Products Safety Commission.
  - e. Agricultural or vegetable seed covered under the labeling regulations of the Department of Agriculture.

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### 4.3 Pictograms and Associated Hazards

Chemical manufacturers, importers, or distributors shall include pictograms on shipped containers. Additionally, Southern Company has the option to include pictograms on workplace containers along with other information as a means of communicating chemical hazards to our employees.

Pictograms shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible. One of eight standard hazard symbols shall be used in each pictogram. The eight hazard symbols are depicted below along with the associated hazards they are intended to communicate:

Flame	Flame Over Circle	Exclamation Mark	Exploding Bomb
 Flammables Self Reactives Pyrophorics Self-heating Emits Flammable Gas Organic Peroxides	 Oxidizers	 Irritant Dermal Sensitizer Acute Toxicity (harmful) Narcotic Effects Respiratory Tract Irritation	 Explosives Self Reactives Organic Peroxides
Corrosion	Gas Cylinder	Health Hazard	Skull and Crossbones
 Corrosives	 Gases Under Pressure	 Carcinogen Respiratory Sensitizer Reproductive Toxicity Target Organ Toxicity Mutagenicity Aspiration Toxicity	 Acute Toxicity (severe)

### 5.0 ACCESS TO CHEMICAL HAZARD INFORMATION (SDSs)

The chemical product information found in SDSs can be viewed or downloaded from the 3E System, the company's official depository of SDS, available through any Southern Company computer with intranet access. In the event that employees are working remotely and cannot access 3E, they can acquire chemical product information via SDS hard copies or by contacting someone to obtain the information from the SDS (other Southern Company personnel or 3E at (800) 451-8346). SDSs shall also be provided to employees, their representatives, and/or regulatory inspectors upon their request.

OSHA mandates that hazardous chemical manufacturers/distributors/importers shall include at least the following section numbers and headings in the SDS and shall be presented in the order listed.

- Section 1 – Identification.
- Section 2 – Hazard(s) identification.
- Section 3 – Composition/information on ingredients.
- Section 4 – First-aid measures.
- Section 5 – Fire-fighting measures.
- Section 6 – Accidental release measures.
- Section 7 – Handling and storage.
- Section 8 – Exposure controls/personal protection.
- Section 9 – Physical and chemical properties.
- Section 10 – Stability and reactivity.
- Section 11 – Toxicological information.
- Section 12 – Ecological information (Non-mandatory).
- Section 13 – Disposal considerations (Non-mandatory).
- Section 14 – Transport information (Non-mandatory).
- Section 15 – Regulatory information (Non-mandatory).
- Section 16 – Other information, including date of preparation or last revision.

#### **6.0 WORKPLACE CHEMICAL INVENTORY**

A list of hazardous chemicals known to be present on site shall be available at all company locations. The hazardous chemicals shall be registered by their product identifier as it appears on the SDS. Inventory verification shall be performed periodically to ensure it remains current.

Chemical inventories are available on the 3E System. The 3E Chemical Inventory System can be accessed by clicking this link or by selecting the Safety link on the Southern Today webpage and then clicking SDS. Employees have unrestricted ability to view SDSs, facilities' chemical inventories, ingredients in products, manufacturer information, and print labels.

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## **7.0 EMPLOYEE INFORMATION AND TRAINING**

### **7.1 Who to Train**

Employees to be trained shall be those who could be exposed to hazardous chemicals under normal working conditions or in the case of emergency.

#### **NOTE**

Office workers who encounter hazardous chemicals only in isolated instances shall not be covered by the Hazard Communication standard. However, if an office worker is routinely required to perform jobs that may expose them to hazardous products, training shall be required.

### **7.2 Frequency**

Employees shall be provided with effective information and training on hazardous chemicals in their work area. Employees shall receive initial training prior to potential exposure to hazardous chemicals. If a new hazard is introduced into the workplace OR non-routine tasks are to be performed, workers shall receive training on the new hazards or job tasks. The completion of training shall be documented in SHIPS.

#### **NOTE**

Hazard communication training shall be performed initially and on an annual basis to ensure that employees understand the hazard communication program.

### **7.3 Content**

Information and training may be designed to cover categories of hazards (for example: flammability, carcinogenicity) or specific chemicals. Chemical-specific information shall always be available through labels and SDSs.

Employees shall be informed of the following:

- a. Any operations in their work area where hazardous chemicals are present.
- b. The location and availability of the written hazard communication program, including the required list of hazardous chemicals, and the required SDSs.

Training shall include at least the following:

- a. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area.
- b. The physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area.

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- c. The measures employees can take to protect themselves from the hazards, such as appropriate work practices, emergency procedures, and PPE to be used.
- d. The details of the hazard communication program including an explanation of the labels received on shipped containers and the workplace labeling system used by their employer; the SDS, including the order of information and how employees can obtain and use the appropriate hazard information.

The following categories shall be covered for Company employees working at power generation facilities or at locations where workers have potential exposures to these types of products:

- a. Acid and caustic agents.
- b. Compressed gases.
- c. Flammable liquids.
- d. Halogenated solvents.

If a facility uses paints, cleaning agents, or any materials from a category not otherwise listed in this program, training shall be conducted on any chemical product categories to which employees can be exposed.

#### **8.0 NON-ROUTINE TASKS**

Employees shall be properly informed of the potential hazards that may be associated with performing non-routine tasks. Non-routine tasks are those which employees may perform so infrequently that they are unaware of or may have forgotten the hazards involved with using the hazardous chemicals required for the task.

Non-routine tasks shall be identified in your site-specific information. In addition, the means by which employees will be informed of the potential hazards from the hazardous chemicals shall also be explained. The training may be conducted in a job safety briefing, toolbox session, or other information sharing methods.

#### **9.0 UNLABELED PIPES**

If the site has piping containing hazardous chemicals, labeling or color-coding for content identification is recommended. If color-coding is used, a description of the color-coding scheme shall be presented in the site-specific information. Regardless of the labeling or color-coding, the hazards associated with chemicals contained in the pipes shall be communicated to employees.

#### **10.0 CONTRACTOR/VENDOR COORDINATION**

##### **10.1 Site Hazards**

Company representatives shall respond to contractor inquiries concerning site hazards. Known hazards are generally identified and communicated during the Contract

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Preparation stage. However, during the course of the work, the Company's contract administrator shall communicate additional hazards as appropriate.

## **10.2 Hazardous Chemicals**

The contractor shall comply with contract provisions and applicable laws and regulations concerning potentially hazardous chemicals. Examples include:

- All materials used by the contractor shall be approved by the Company prior to these substances being brought on-site.
- All approved materials shall be supported by an SDS.
- All materials shall be stored in containers approved for storage of that product and all containers shall be in good condition.
- All containers shall be clearly labeled in compliance with all regulations.
- All containers shall be stored in a manner to provide adequate security of the chemicals

## **10.3 Prior to Work**

Prior to beginning work on Company property, the contractors shall be notified of hazardous chemicals to which the contractor's employees may be exposed and the appropriate control measures needed to limit such exposure (for example: alarms, evacuation routes). Copies of SDSs for these materials shall be provided to the contractor upon request. The Company shall inform the contractor of the location and content of the facility's written Hazard Communication Program.

## **10.4 Obligations**

The full extent of the Company's and the contractor's obligations are spelled out in the standard form contract (refer to the facility's contractor handbook if available or to the Southern Company Contract Manual).

## **11.0 STATE AND OTHER JURISDICTIONAL REQUIREMENTS**

Business units shall determine if there are any state or other jurisdictional hazard communication requirements that affect their locations. If requirements do exist, and if they are more restrictive than the requirements in this program, they shall be incorporated into the site-specific hazard communication program.

## **12.0 REFERENCES**

29 CFR 1910.1200, Hazard Communication

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### 13.0 DOCUMENT REVISION LOG

1. March 26, 2004 - Section 2101.300.F. - Deleted misleading language that implied chemicals used in laboratories may not require labeling. Section 2101.500 - Deleted vague language concerning chemical inventory of products not currently on site.
2. February 18, 2005 - Updated guideline and site specific procedures (Appendix I) to reference the new 3E Chemical Inventory System and deleted all reference to the retired Chem-RTK system. Simplified statement in 2101.300.A (second bullet) to remove reference to have labels include applicable target organ affects (e.g. eye irritant, corrosive lungs, and mucous membranes, etc.). According to OSHA Directive CPL 02-02-038 - CPL 2-2.38D paragraph (f)(5), employers may provide general information regarding the hazards of chemicals on labels as long as other information is immediately available. MSDS's and summary information is provided on the web-based chemical inventory database available to all Southern Company employees. In addition, all employees are informed of this access in compliance training. The Directive also states that NFPA and HMIS labels are sufficient for in-plant labeling even though target organs are not provided on these container labels.
3. January 17, 2007 - Section 2101.500 and Appendix I - updated access and user instructions for updated 3E System.
4. August 30, 2012 - Various sections- updated entire document in accordance with OSHA's revised Hazard Communication standard, effective date May 25, 2012.
5. August 9, 2013-Variou sections-updated entire document: revised the table of contents, added purpose and scope, deleted the word "program" and added an attachment for a site specific program

### 14.0

Attachment 1, Required Site Specific Information

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**Attachment 1**  
**Required Site-Specific Information**

Location:

Revision Date:

**A. Program Element Responsibilities**

	<i>The following individuals have program responsibilities for specific program elements:</i>	
<b>Responsibility</b>	<b>Name</b>	<b>Contact Numbers</b>
This individual is responsible for all the listed activities:		
Overall site coordination:		
Review and updates of site-specific information (Appendix I):		
Product labeling:		
SDS maintenance, availability, and acquisition:		
Providing information and training; recordkeeping of training:		
Maintaining up-to-date list of hazardous chemicals (inventory):		
Information/training for non-routine tasks:		
Contractor coordination:		

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**B. Safety Data Sheets**

1. SDSs for this site are maintained electronically on the 3E Chemical Inventory System.

**NOTE**

If you use the 3E system, the following information applies

The 3E System is located on the Southern Today website under Safety. Employees have unrestricted ability to view SDSs, chemical inventories, ingredients in products, manufacturer information, and print labels.

3E System procedure for viewing or printing an SDS:

- a. Under (M)SDS tab, choose "Product Name" as the <Search Criterion> in the "Search for" box
  - b. Type your product name and click "Search"
  - c. Click blue document icon next to your product and then "view, email or fax" the SDS
  - d. Manufacturer, Part Number, etc. can also be used as the
2. SDSs for this site are maintained as hard copies.

Describe how MSDSs can be obtained at this site (e.g. where the hard copies are located):

**C. Workplace labeling**

If applicable, describe the procedures and systems used at this site for workplace labeling of hazardous chemicals.

**D. List of Hazardous Chemicals**

The list of hazardous chemicals (workplace inventory) is maintained electronically using the 3E System.

Note: When the 3E System is used to generate a workplace inventory, the following information applies

3E System procedure for finding a product on the chemical inventory list:

- a. Under Inventory tab choose "Search Inventory"
- b. Choose your location from the facility tree on the left, by clicking the + buttons under My Locations and Southern Company and highlight red

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- c. Then Search for the product as you did in the above instructions; Click the "Show All" button to view the entire chemical inventory
- d. If the product is not on your inventory, notify Compliance Team member to have the product added.

3E procedure for printing a chemical inventory:

- a. Under Inventory tab choose "Inventory Reports"
- b. Choose your location from the facility tree on the left, by clicking the + buttons under My Locations and Southern Company and highlight red
- c. Select the type of report you would like to run
- d. Choose "Run Report"

The list of hazardous chemicals (workplace inventory) for this location is maintained as a hard copy in the following location:

Additional Site Specific Procedures

**E. Information and Training**

1. The following site-specific hazard communication training is provided to employees at this site:
2. Training records for this facility are maintained electronically in SHIPS

**F. Non-routine Tasks**

1. The following non-routine tasks may be performed at this site:

**NOTE**

Include information about the hazards associated with these tasks  
(e.g. hazardous chemicals required)

[Example entry - replace with your own tasks]

System A - Ash Handling

Task - Spray Coating parts with Wear Resistant Epoxy or other materials

Hazard - Fumes, Contact with skin, Environmental disposal of waste

Products - Epoxy, Paint, Solvents, Paint Thinner

2. Describe the method used to inform employees and applicable contractor employees of the hazards associated with the non-routine tasks:

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**G. Unlabeled Piping**

1. This site does / does not have pipes containing hazardous chemicals.
2. This site does / does not use a color coding scheme to label pipes containing hazardous chemicals.
3. If applicable, the following is a description of this site's color-coding scheme for piping containing hazardous chemicals:
4. For areas where hazardous chemicals are transferred in unlabeled pipes, workers must contact appropriate personnel to determine:
  - The chemicals in the pipes;
  - The potential hazards, and;
  - Safety precautions to be taken.

UNCONTROLLED COPY

**Attachment 1**  
**Required Site-Specific Information**



**Location:** Plant Bowen

**Revision Date:** 09/12/2014

**A. Program Element Responsibilities**

<i>The following individuals have program responsibilities for specific program elements:</i>		
<b>Responsibility</b>	<b>Name</b>	<b>Contact Numbers</b>
This individual is responsible for all the listed activities:	John Taylor	8-594-6113
Overall site coordination:	John Taylor	8-594-6113
Review and updates of site-specific information (Appendix I):	John Taylor	8-594-6113
	Jared Choat	8-506-1367
Product labeling:	John Taylor	8-594-6113
	Randy Arp	8-594-6359
SDS maintenance, availability, and acquisition:	John Taylor	8-594-6113
	Randy Arp	8-594-6359
Providing information and training; recordkeeping of training:	John Taylor	8-594-6113
	Randy Arp	8-594-6359
Maintaining up-to-date list of hazardous chemicals (inventory):	John Taylor	8-594-6113
	Randy Arp	8-594-6359
Information/Training for non-routine tasks:	John Taylor	8-594-6113
Contractor coordination:	John Taylor	8-594-6113
	Daryl McLamb	8-594-6410

**B. Safety Data Sheets**

1. SDSs for this site are maintained electronically on the 3E Chemical Inventory System.

**NOTE**

If you use the 3E system, the following information applies

The 3E System is located on the Southern Today website under Safety & Health. Employees have unrestricted ability to view SDS's, chemical inventories, ingredients in products, manufacturer information, and print labels.

3E System procedure for viewing or printing a SDS:

- a. Under (M)SDS tab, choose "Product Name" as the <Search Criterion> in the "Search for" box.
  - b. Type your product name and click "Search".
  - c. Click Adobe icon next to your product and then "view, email or fax" the SDS.
  - d. Can also use Manufacturer, Part Number, etc. as the <Search Criterion>.
2. SDSs for this site are maintained as hardcopies.

Describe how SDSs can be obtained at this site. (e.g. where the hard copies are located, etc.):

N/A

**C. Workplace labeling**

If applicable, describe the procedures and systems used at this site for workplace labeling of hazardous chemical.

A. No chemical or chemical product will be accepted unless labeled with the following Hazard Communication labeling information:

1. Identity of the hazardous chemical or chemical product.
2. Health hazard warning.
- 3 Target organs affected by the product.
4. Name and address of the chemical manufacturer, importer, or other responsible party.

B. All labels on secondary containers will be prominently displayed on container. In addition to the Hazard Communication labeling requirements satated above, the NFPA and/or HMIS labeling system may be used.

Block Flow  
P I + D  
Relief val. CAI

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# CROSBY

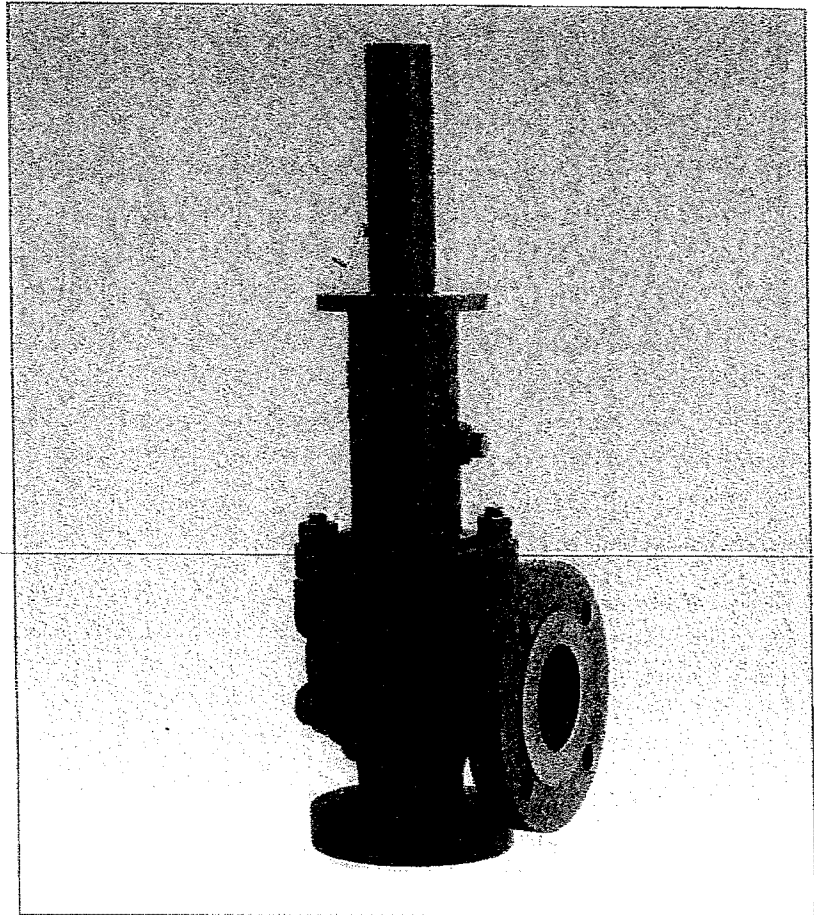
Provides high quality overpressure protection for air, gas, steam, vapor, liquid and two-phase applications in a standardized design.

## Features

- Rugged nozzle ring design.
- Improved disc insert retention for ease of maintenance.
- Standard Inconel® 625 bellows and flange material for superior corrosion resistance, longer service life and a wider range of applications.
- Universal disc holder allows for simple and cost-effective conversions from conventional to balanced bellows design.
- Standard threaded bellows design for ease of maintenance and conversion from conventional to balanced bellows design.
- Optional welded bellows attachment is available for special applications.
- Series JLT capacities certified on liquid and gas.
- Improved parts interchangeability, regardless of top construction.
- Field proven series JLT trim (patented) for stable, non-chattering operation on liquid and gas service.
- Standard chrome steel spring for -75°F to +650°F [-59°C to +343°C].
- Easily converted to any type cap or lifting lever construction, liquid trim, soft seat or balanced bellows configurations.
- Full compliance with ASME Boiler and Pressure Vessel Code Section VIII and API Standards 526 and 527.

## Valve Series

- JOS-E
- JBS-E
- JBS-BP-E
- JOS-H-E
- JLT-JOS-E
- JLT-JBS-E
- JLT-JBS-BP-E



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# Crosby Series JOS-E, JBS-E, JLT-JOS-E, JLT-JBS-E, JOS-H-E Spring Loaded Pressure Relief Valves

## Series Designations

4L6 JOS-E

3

5

J

Size Inlet x Orifice x Outlet	Series	Seat Type	Pressure/Temperature Inlet Flange Range Ratings <sup>3</sup>		Material Variations <sup>4</sup>	Caps and Lifting Levers (Type)
1" D 2" to 8" T2 10"	JOS-E-Conventional JBS-E-with bellows JLT-JOS-E- Conventional with liquid trim <sup>1</sup> JLT-JBS-E-Bellows with liquid trim <sup>1</sup> JBS-BP-E-Bellows with back pressure balancing piston JLT-JBS-BP-E- Bellows with liquid trim and back pressure balancing piston <sup>1</sup> JOS-H-E- Conventional JOS with open bonnet for ASME Code Section VIII steam service to +800°F [+427°C] <sup>2</sup>	None - Metal "OR" - O-ring  When ordering soft seats, specify material (see page 13).	1 - CL 150 Flange 2 - CL 300 Flange 3 - CL 300 Flange 4 - CL 600 Flange 5 - CL 900 Flange 6 - CL 1500 Flange 7 - CL 2500 Flange  *Except "T" and "T2" orifice is CL 300 flange	2 - 450°F to -76°F [-268°C to -60°C] 4 - 75°F to -21°F [-59°C to -30°C] 5 - -20°F to +650°F [-29°C to +343°C] 6 - +651°F to +900°F [+344°C to +427°C] 7 - +801°F to +1000°F [+428°C to +538°C]  *Except for Series JOS-H-E with open bonnet, chrome steel spring may be used to +800°F [+427°C]	None - Standard Materials S - All 316 SS S4 - All 316 SS except body, bonnet, cap and spring M - All Monel <sup>®</sup> with Monel <sup>®</sup> or Inconel <sup>®</sup> spring M1 - Monel <sup>®</sup> nozzle and disc insert M4 - All Monel <sup>®</sup> except body, bonnet, cap, spring and washers M5 - All Monel <sup>®</sup> except spring and washers H - All Hastelloy <sup>®</sup> C H1 - Hastelloy <sup>®</sup> C nozzle and disc insert H4 - All Hastelloy <sup>®</sup> C except body, bonnet, cap, spring and washers H5 - All Hastelloy <sup>®</sup> C except spring and washers N2 - NACE Level 2 JOS-E = Inconel <sup>®</sup> X750 spring, 316 SS washers, spindle and adjusting bolt JBS-E = Aluminum Metallized Spring	Type J - (Standard) threaded cap Type K - Threaded cap with test rod Type C - Regular lifting lever <sup>5</sup> Type D - Packed lifting lever <sup>5</sup> Type E - Packed lifting lever with test rod <sup>5</sup> Type L - Bolted cap Type M - Bolted cap with test rod  <b>Optional Caps for Height Restricted Applications</b> Type A - Threaded cap Type B - Threaded cap with test rod Type G - Bolted cap Type H - Bolted cap with test rod

## Available Options

- Welded bellows attachment.
- Flange facings such as ring type joint.
- Special connections such as tri-clamp, Grayloc, etc.
- Special CL 300 outlets (where not standard).
- Special Teflon<sup>®</sup> (FEP) bellows coating.
- Special spring coatings or plating.
- Materials of construction for applications above 1000°F.
- Bonnet and cap inside painting or plastic coating.
- Optional gasket materials such as GRAFOIL<sup>®</sup>, Hastelloy<sup>®</sup>, Teflon<sup>®</sup>, etc.
- Special materials not cataloged, such as Alloy 20, Titanium, duplex stainless steel, etc.
- Flanges to international standards.
- Position indicators, proximity switches, etc.
- Special casting or machined surface tests.
- Special cleaning.
- Special painting or coatings.
- Special testing.
- Steam jacketed bodies.
- Lethal service construction.

## Notes

1. Series designations "JLT-JOS-E", "JLT-JBS-E", or "JLT-JBS-BP-E" signify Series JOS-E, JBS-E or JBS-BP-E with liquid trim for liquid and/or gas service.
2. Upper temperature limit is +800°F [+427°C] for Series JOS-H-E open bonnet valve for ASME Code Section VIII steam service.
3. See pages 18-47 for appropriate maximum set pressures and temperatures.
4. See pages 4-11 and 14-15 for complete listings of materials of construction.
5. ASME Code Section VIII rules require that pressure relief valves for water service over +140°F [+60°C], steam and air shall have a lifting device.

ATTACHMENT 'D'  
Page 2/4

**CROSBY SERIES JOS-E, JBS-E, JLT-JOS-E, JLT-JBS-E, JOS-H-E**  
**SPRING LOADED PRESSURE RELIEF VALVES**

L6 D - PN2

*[Handwritten: L6 D - PN2]*

**Model number supplements<sup>7</sup>**

- P - PED Certification
- N2 - NACE MR0175-2002 Edition<sup>4,9</sup>
- S - Stream trim set pressure above 450 psig
- B - Forged block body configuration
- SPL - Non-standard option or configuration

**Model number supplement indicator**

- None - No model number supplement(s)  
 If model number supplement is present

**Cap and lifting lever type<sup>5</sup>**

- J - [Standard] threaded cap
- K - Threaded cap with test rod
- C - Regular lifting lever
- D - Packed lifting lever
- E - Packed lifting lever with test rod
- L - Bolted cap
- M - Bolted cap with test rod
- A - Threaded cap (restricted height)
- B - Threaded cap with test rod (restricted height)
- G - Bolted cap (restricted height)
- H - Bolted cap with test rod (restricted height)
- T - Regular lifting lever with test rod and Type K with test rod
- X - Other

**Material variations**

- None - Standard materials
- C6 - CS body and bonnet and bonnet/316 SS trim/Inconel® X750 spring<sup>6</sup>
- S4 - CS body and bonnet/316 SS trim/Ctd. chrome steel spring
- S6 - SST body and bonnet/316 SS trim/Inconel® X750 spring
- S - SST body and bonnet/316 SS trim/316 spring
- LT - Low temp CS body and bonnet/SST trim/Ctd. chrome steel spring
- L6 - Low temp CS body and bonnet/SST trim/Inconel® X750 spring
- M1 - CS body and bonnet/SST and Monel® trim/Ctd. chrome steel spring
- M4 - CS body and bonnet/Monel® trim/Ctd. chrome steel spring
- M5 - Monel® body and bonnet/Monel® trim/Ctd. chrome steel spring
- M6 - Monel® body and bonnet/Monel® trim/Inconel® X750 spring
- M - Monel® body and bonnet/Monel® trim/Monel® spring
- H1 - CS body and bonnet/SST and Hastelloy® Trim/Ctd. chrome steel spring
- H4 - CS body and bonnet/Hastelloy® trim/Ctd. Chrome steel spring
- H5 - Hastelloy® body and bonnet/Hastelloy® trim/Ctd. chrome steel spring
- H6 - Hastelloy® body and bonnet/Hastelloy® trim/Inconel® X750 spring
- H - Hastelloy® body and bonnet/Hastelloy® trim/Hastelloy® spring
- XX - Other

**Notes:**

- |  |  |   |
|--|--|---|
| <p>(1) When ordering soft seats, specify material according to page 15.</p> <p>(2) Except "T" and "T2" orifices. These have 300# inlet flange.</p> <p>(3) JOS-H-E may be used up to 860°F [427°C].</p> | <p>(4) See pages 20-51 for appropriate maximum set pressures, temperatures, and outlet flange.</p> <p>(5) Refer to page 19 for ASME Code Section VIII requirements regarding lifting lever.</p> <p>(6) Contact sales representative for compliance to NACE MR0175-2003 or later.</p> | <p>(7) More than one model number supplement can be used at once.</p> <p>(8) Only applies to non-NACE applications.</p> <p>(9) NACE MR0175-2002 materials of construction on pages 10 and 11.</p> |
|--|--|---|

*ATTACHMENT 'D'*

**CROSBY SERIES JOS-E, JBS-E, JLT-JOS-E, JLT-JBS-E, JOS-H-E**  
**SPRING LOADED PRESSURE RELIEF VALVES**

**AIR CAPACITIES - SERIES JOS-E, JBS-E, JLT-JOS-E AND JLT-JBS-E, USCS UNITS<sup>1</sup> (UNITED STATES CUSTOMARY SYSTEM) SET PRESSURES 5 - 880 PSIG**

Set pressure (psig)	Orifice letter designation and effective area, sq.in.																
	D	E	F	G	H	J	K	L	M	N	P	Q	R	T	T2	V	W
1 psi incr.	2.2	3.9	6.1	9.9	15.5	25.3	36.2	56.2	70.9	85.5	126	218	315	512	549	635	1362
5 psi incr.	10.8	19.3	30.3	49.5	77.4	127	181	281	355	427	428	1088	1575	2560	2744	4173	6810
5			124	204	319	522	747					4489					
6			130	213	333	546	780	1210				4686					
7			135	222	347	569	813	1261				4884					
8		90.2	141	231	361	592	845	1312	1656		2621	4584					
9		93.7	146	240	375	615	878	1363	1720	1996	2936	5082	7361	11964	12824		
10	54.6	97.2	152	249	389	638	911	1414	1785	2152	3164	5477	7934	12895	13822		
15	64.5	114	179	294	459	753	1076	1670	2107	2540	3735	6466	9366	15222	16317	21807	40487
20	74.3	132	207	339	530	858	1240	1925	2429	2929	4307	7455	10798	17550	18812	28600	46677
30	94.0	167	262	429	670	1098	1570	2436	3074	3706	5449	9433	13663	22205	23802	36187	59059
40	115	206	322	528	825	1352	1932	2897	3783	4560	6706	11608	16814	27326	29291	44532	72678
50	137	244	383	627	980	1605	2294	3559	4492	5415	7962	13783	19965	32447	34780	52877	86258
60	159	283	444	726	1135	1859	2656	4121	5201	6270	9219	15959	23116	37557	40269	61222	99917
70	180	321	504	825	1289	2112	3018	4683	5910	7124	10476	18134	26266	42638	45758	69567	113537
80	202	360	565	923	1444	2366	3380	5245	6619	7979	11732	20309	29417	47809	51247	77912	127157
90	224	399	625	1022	1599	2619	3742	5807	7328	8834	12889	22485	32568	52930	56736	86257	140776
100	245	437	686	1121	1753	2872	4104	6368	8037	9688	14246	24660	35719	58051	62225	94603	154356
120	289	515	807	1319	2063	3379	4829	7482	9455	11397	16759	29011	42021	68292	73203	111293	181635
140	332	592	928	1517	2372	3886	5553	8616	10873	13107	19273	33362	48323	78534	84181	127983	208874
160	376	669	1049	1715	2682	4393	6277	9739	12291	14816	21786	37712	54624	88775	95158	144673	236113
180	419	746	1170	1913	2991	4900	7001	10863	13709	16525	24299	42063	60926	99017	106136	161363	263352
200	462	823	1291	2111	3300	5407	7725	11986	15127	18235	26813	46414	67228	109258	117114	178054	290591
220	506	901	1412	2309	3610	5914	8449	13110	16545	19944	29326	50764	73530	119500	128092	194744	317830
240	549	978	1533	2507	3919	6421	9174	14234	17963	21653	31840	55115	79832	129741	139070	211434	345069
260	593	1055	1654	2705	4229	6927	9896	15357	19381	23363	34353	59466	86133	139983	150048	228124	372308
280	636	1132	1775	2903	4538	7434	10622	16481	20799	25072	36866	63817	92435	150225	161026	244814	399547
300	679	1210	1896	3101	4848	7941	11346	17604	22217	26781	39380	68167	98737	160466	172004	261505	426786
320	723	1287	2017	3299	5157	8448	12070	18728	23635	28491	41893	72518	105039				
340	766	1364	2138	3497	5466	8955	12795	19852	25054	30200	44406	76869	111340				
360	810	1441	2259	3695	5776	9462	13519	20975	26472	31909	46920	81220	117642				
380	853	1519	2380	3892	6085	9969	14243	22099	27890	33619	49433	85570	123944				
400	896	1596	2501	4090	6395	10475	14967	23222	29308	35328	51947	89921	130246				
420	940	1673	2622	4288	6704	10982	15691	24346	30726	37037	54460	94272	136548				
440	983	1750	2743	4486	7013	11489	16416	25470	32144	38746	56973	98622	142849				
460	1027	1827	2864	4684	7323	11996	17140	26593	33562	40456	59487	102973	149151				
480	1070	1905	2986	4882	7632	12503	17864	27717	34980	42165	62000	107324	155453				
500	1113	1982	3107	5080	7942	13010	18588	28841	36398	43874	64514	111675	161755				
520	1157	2059	3228	5278	8251	13517	19312	29964	37816	45584	67027	116025	168056				
540	1200	2136	3349	5476	8561	14023	20037	31088	39234	47293	69540	120376	174358				
560	1244	2214	3470	5674	8870	14530	20761	32211	40652	49002	72054	124727	180660				
580	1287	2291	3591	5872	9179	15037	21485	33335	42070	50712	74567	129077	186962				
600	1330	2368	3712	6070	9489	15544	22209	34459	43488	52421	77080	133428	193263				
620	1374	2445	3833	6268	9798	16051	22933	35582	44906	54130	79594	137779	199565				
640	1417	2523	3954	6466	10108	16558	23657	36706	46324	55840	82107	142130	205867				
660	1461	2600	4075	6663	10417	17065	24382	37829	47742	57549	84621	146480	212169				
680	1504	2677	4196	6861	10727	17572	25106	38953	49160	59258	87134	150831	218471				
700	1547	2754	4317	7059	11036	18078	25830	40077	50578	60968	89647	155182	224772				
720	1591	2831	4438	7257	11345	18585	26554	41200	51996	62577	92161	159532	231074				
740	1634	2909	4559	7455	11655	19092	27278	42324	53414	64386	94674	163883	237376				
760	1678	2986	4680	7653	11964	19599	28003	43447	54832	66095	97188	168234	243678				
780	1721	3063	4801	7851	12274	20106	28727	44571	56250	67805	99701	172585	249979				
800	1764	3140	4922	8049	12583	20613	29451	45695	57688	69514	102214	176935	256281				
820	1808	3218	5043	8247	12892	21120	30175	46818	59086	71223	104728	181286	262583				
840	1851	3295	5164	8445	13202	21626	30899	47942	60504	72933	107241	185637	268885				
860	1895	3372	5285	8643	13511	22133	31624	49066	61922	74642	109754	189987					
880	1938	3449	5406	8841	13821	22640	32348	50189	63340	76351	112268	194338					

Notes:

**Notes:**

- For air capacities, USCS Units are exact equivalents of Imperial Units
- Not valid below 30 psig set pressure.
- Capacities below 30 psig set pressure are calculated at 3 psi overpressure.

**SHADED VALUES ARE JOS-E ONLY.**

Capacity in standard cubic feet per minute of air at 60°F and 10% overpressure. Valve discharging to atmospheric pressure.

Capacities at 15 psig and above are certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII.

ATTACHMENT 1 D  
 Page 4 of 4

### Appendix A—Minimum required flow rate of pressure relief devices for fire protection (Normative)

Pressure relief valves for excessive heat or fire protection used on containers covered by Sections 6, 11, and 12 shall be constructed to discharge at not less than the rates required in Appendix A before the pressure is in excess of 121% of the MAWP of the container. Relief protection for any other reason shall use ASME UG-125 UG-126, UG-127, UG-128, UG-129, UG-130, UG-131, UG-132, UG-133, UG-134, UG-135, and UG-136 [17].

Surface area, ft <sup>2</sup>	Flow rate ft <sup>3</sup> /min air	Surface area, m <sup>2</sup>	Flow rate m <sup>3</sup> /min air	Surface area, ft <sup>2</sup>	Flow rate ft <sup>3</sup> /min air	Surface area, m <sup>2</sup>	Flow rate m <sup>3</sup> /min air	Surface area, ft <sup>2</sup>	Flow rate ft <sup>3</sup> /min air	Surface area, m <sup>2</sup>	Flow rate m <sup>3</sup> /min air	Surface area, ft <sup>2</sup>	Flow rate ft <sup>3</sup> /min air	Surface area, m <sup>2</sup>	Flow rate m <sup>3</sup> /min air
30	255	1.9	7.3	145	1310	13.5	37.1	340	2820	31.5	74.8	1355	8150	125.4	231.0
35	310	2.3	8.6	155	1350	13.9	38.1	350	2700	32.5	76.3	1400	8410	130.1	237.9
40	365	2.8	10.2	165	1390	14.4	39.2	360	2760	33.5	78.1	1450	8650	134.7	244.9
45	420	3.3	11.6	175	1420	14.9	40.2	370	2830	34.4	79.5	1500	8900	139.4	251.8
50	475	3.7	12.9	185	1460	15.3	41.2	380	2890	35.3	81.7	1550	9140	144.0	258.7
55	530	4.2	14.2	195	1500	15.8	42.2	390	2950	36.2	83.4	1600	9380	148.6	265.5
60	585	4.7	15.5	205	1530	16.3	43.2	400	3010	37.2	85.2	1650	9620	153.3	272.3
65	640	5.1	16.7	215	1570	16.7	44.3	410	3070	38.1	86.9	1700	9860	157.9	279.0
70	695	5.6	18.0	225	1600	17.2	45.3	420	3130	39.0	88.6	1750	10100	162.6	285.7
75	750	6.0	19.2	235	1640	17.7	46.3	430	3190	40.0	90.3	1800	10340	167.2	292.4
80	805	6.5	20.4	245	1670	18.1	47.3	440	3250	41.0	92.0	1850	10580	171.9	299.0
85	860	7.0	21.6	255	1710	18.6	48.3	450	3310	42.0	93.7	1900	10820	176.5	305.6
90	915	7.4	22.8	265	1750	19.1	49.2	460	3370	43.0	95.4	1950	11060	181.2	312.2
95	970	7.9	23.9	275	1790	19.6	50.2	470	3430	44.0	97.1	2000	11300	185.8	318.8
100	1025	8.4	25.1	285	1830	20.1	51.1	480	3490	45.0	98.8	2050	11540	190.5	325.3
105	1080	8.8	26.2	295	1870	20.6	52.0	490	3550	46.0	100.5	2100	11780	195.1	331.8
110	1135	9.3	27.3	305	1910	21.1	52.9	500	3610	47.0	102.2	2150	12020	199.7	338.3
115	1190	9.8	28.5	315	1950	21.6	53.8	510	3670	48.0	103.9	2200	12260	204.3	344.7
120	1245	10.2	29.6	325	1990	22.1	54.7	520	3730	49.0	105.6	2250	12500	209.0	351.1
125	1300	10.7	30.7	335	2030	22.6	55.6	530	3790	50.0	107.3	2300	12740	213.7	357.5
130	1355	11.2	31.7	345	2070	23.1	56.5	540	3850	51.0	109.0	2350	12980	218.3	363.8
135	1410	11.6	32.8	355	2110	23.6	57.4	550	3910	52.0	110.7	2400	13220	223.0	370.2
140	1465	12.1	33.9	365	2150	24.1	58.3	560	3970	53.0	112.4	2450	13460	227.6	376.5
145	1520	12.5	35.0	375	2190	24.6	59.2	570	4030	54.0	114.1	2500	13700	232.3	382.8
150	1575	13.0	36.0	385	2230	25.1	60.1	580	4090	55.0	115.8	2550	13940	236.9	389.0

#### NOTES

Surface area = total outside surface area of container in square feet. When the surface area is not stamped on the name plate or when the marking is not legible, the area can be calculated by using one of the following formulas:

- (1) Cylindrical container with hemispherical heads—Area = overall length (ft) × OD (ft) × 3.1416
- (2) Cylindrical container with other than hemispherical heads—Area = (overall length (ft) + 0.3 OD (ft)) × OD (ft) × 3.1416
- (3) Spherical container—Area = OD (ft)<sup>2</sup> × 3.1416

Flow rate ft<sup>3</sup>/min air = ft<sup>3</sup>/min of air required at standard conditions, 60 °F (15.6 °C) and atmospheric pressure (14.7 psia, [101.3 kPa, abs])

The rate of discharge may be interpolated for intermediate values of surface area. For containers with total outside surface area greater than 2500 ft<sup>2</sup>, the required flow rate can be calculated using the formula:

$$\text{Flow rate ft}^3/\text{min air} = 22.11 A^{0.82}$$

Where:

A = outside surface area of the container in square feet

Conversion factors:

- ft<sup>2</sup> × 0.092903 = m<sup>2</sup>
- ft<sup>3</sup>/min × 0.028 317 = m<sup>3</sup>/min
- ft × 0.3048 = m

Regd. SCFM.

Attachment 'E'  
Page 1 of 1

Physical Properties of Gases<sup>13</sup>

(Approximate values at 68°F and 14.7 psia)

 $c_p$  = specific heat at constant pressure  
 $c_v$  = specific heat at constant volume

Name of Gas	Chemical Formula or Symbol	Approx. Molecular Weight M	Weight Density, Pounds per Cubic Foot	Specific Gravity Relative to Air	Individual Gas Constant R	Specific Heat at Room Temperature Btu/Lb °F		Heat Capacity per Cubic Foot		k equal to $c_p/c_v$
						$c_p$	$c_v$	$c_p$	$c_v$	
Acetylene (ethyne)	$C_2H_2$	26.0	.0682	0.907	59.4	0.350	0.269	.0239	.0184	1.30
Air		29.0	.0752	1.000	53.3	0.241	0.172	.0181	.0129	1.40
Ammonia	$NH_3$	17.0	.0448	0.596	91.0	0.523	0.396	.0234	.0178	1.32
Argon	A	39.9	.1037	1.379	38.7	0.124	0.074	.0129	.0077	1.67
Butane	$C_4H_{10}$	58.1	.1554	2.067	26.5	0.395	0.356	.0614	.0553	1.11
Carbon dioxide	$CO_2$	44.0	.1150	1.529	35.1	0.205	0.158	.0236	.0181	1.30
Carbon monoxide	CO	28.0	.0727	0.967	55.2	0.243	0.173	.0177	.0126	1.40
Chlorine	$Cl_2$	70.9	.1869	2.486	21.8	0.115	0.086	.0215	.0162	1.33
Ethane	$C_2H_6$	30.0	.0789	1.049	51.5	0.386	0.316	.0305	.0250	1.22
Ethylene	$C_2H_4$	28.0	.0733	0.975	55.1	0.400	0.329	.0293	.0240	1.22
Helium	He	4.0	.01039	0.1381	386.3	1.250	0.754	.0130	.0078	1.66
Hydrogen chloride	HCl	36.5	.0954	1.268	42.4	0.191	0.135	.0182	.0129	1.41
Hydrogen	$H_2$	2.0	.00523	0.0695	766.8	3.420	2.426	.0179	.0127	1.41
Hydrogen sulphide	$H_2S$	34.1	.0895	1.190	45.2	0.243	0.187	.0217	.0167	1.30
Methane	$CH_4$	16.0	.0417	0.554	96.4	0.593	0.449	.0247	.0187	1.32
Methyl chloride	$CH_3Cl$	50.5	.1342	1.785	30.6	0.240	0.200	.0322	.0268	1.20
Natural gas		19.5	.0502	0.667	79.1	0.560	0.441	.0251	.0221	1.27
Nitric oxide	NO	30.0	.0780	1.037	51.5	0.231	0.165	.0180	.0129	1.40
Nitrogen	$N_2$	28.0	.0727	0.967	55.2	0.247	0.176	.0180	.0127	1.41
Nitrous oxide	$N_2O$	44.0	.1151	1.530	35.1	0.221	0.169	.0254	.0194	1.31
Oxygen	$O_2$	32.0	.0831	1.105	48.3	0.217	0.155	.0180	.0129	1.40
Propane	$C_3H_8$	44.1	.1175	1.562	35.0	0.393	0.342	.0462	.0402	1.15
Propene (propylene)	$C_3H_6$	42.1	.1091	1.451	36.8	0.358	0.314	.0391	.0343	1.14
Sulphur dioxide	$SO_2$	64.1	.1703	2.264	24.0	0.154	0.122	.0262	.0208	1.26

Molecular Weight, Specific Gravity, Individual Gas Constant, and Specific Heat values were abstracted from, or based on, data in Table 24 of Mark's "Standard Handbook for Mechanical Engineers" (seventh edition).

Weight Density values were obtained by multiplying density of air by specific gravity of gas. For values at 60°F, multiply by 1.0154.

Natural Gas values are representative only. Exact characteristics require knowledge of specific constituents.

Volumetric Composition and Specific Gravity of Gaseous Fuels<sup>13</sup>

Type of Gas	Chemical Composition Percent by Volume								Specific Gravity Relative to Air $S_g$	
	Hydro- gen	Carbon Mon- oxide	Paraffin Hydrocarbons		Illuminants		Oxy- gen	Nitro- gen		Carbon Diox- ide
			Meth- ane	Eth- ane	Ethyl- ene	Benz- ene				
Natural Gas, Pittsburgh	...	...	83.4	15.8	...	...	...	...	...	...
Producer Gas from Bituminous Coal	14.0	27.0	3.0	...	...	...	0.6	50.9	4.5	0.61
Blast Furnace Gas	1.0	27.5	...	...	...	...	...	60.0	11.5	0.86
Blue Water Gas from Coke	47.3	37.0	1.3	...	...	...	...	...	...	1.02
Carbureted Water Gas	40.5	34.0	10.2	...	...	...	0.7	8.3	5.4	0.57
Coal Gas (Cont. Vertical Retorts)	54.5	10.9	24.2	...	6.1	2.8	0.5	2.9	3.0	0.63
Coke-Oven Gas	46.5	6.3	32.1	...	1.5	1.3	0.2	4.4	3.0	0.42
Refinery Oil Gas (Vapor Phase)	13.1	1.2	23.3	21.7	3.5	0.5	0.8	8.1	2.2	0.44
Oil Gas, Pacific Coast	48.6	12.7	26.3	...	39.6	...	1.0	...	0.1	0.89
					2.7	1.1	0.3	3.6	4.7	0.47

Attachment F  
Page 1 of 1

## MANDATORY APPENDIX 11

### CAPACITY CONVERSIONS FOR SAFETY VALVES

#### 11-1

The capacity of a safety or relief valve in terms of a gas or vapor other than the medium for which the valve was officially rated shall be determined by application of the following formulas:<sup>1</sup>

For steam,

$$W_s = C_N K A P$$

where

$C_N = 51.5$  for U.S. Customary calculations

$C_N = 5.25$  for SI calculations

For air,

$$W_a = C K A P \sqrt{\frac{M}{T}}$$

(U.S. Customary Units)

$C = 356$

$M = 28.97$  mol. wt.

$T = 520$  when  $W_a$  is the rated capacity

(SI Units)

$C = 27.03$

$M = 28.97$  mol. wt.

$T = 293$  when  $W_a$  is the rated capacity

For any gas or vapor,

$$W = C K A P \sqrt{\frac{M}{T}}$$

where

$W_s$  = rated capacity, lb/hr (kg/h) of steam

$W_a$  = rated capacity, converted to lb/hr (kg/h) of air at 60°F (20°C), inlet temperature

<sup>1</sup> Knowing the official rating capacity of a safety valve which is stamped on the valve, it is possible to determine the overall value of  $KA$  in either of the following formulas in cases where the value of these individual terms is not known:

Official Rating in Steam

$$KA = \frac{W_s}{51.5P}$$

Official Rating in Air

$$KA = \frac{W_a}{CP} \sqrt{\frac{T}{M}}$$

This value for  $KA$  is then substituted in the above formulas to determine the capacity of the safety valve in terms of the new gas or vapor.

$W$  = flow of any gas or vapor, lb/hr

$C$  = constant for gas or vapor which is function of the ratio of specific heats,  $k = c_p/c_v$  (see Fig. 11-1)

$K$  = coefficient of discharge [see UG-131(d) and (e)]

$A$  = actual discharge area of the safety valve, sq in. (sq mm)

$P$  = (set pressure  $\times 1.10$ ) plus atmospheric pressure, psia (MPa<sub>abs</sub>)

$M$  = molecular weight

$T$  = absolute temperature at inlet [(°F + 460) (K)]

These formulas may also be used when the required flow of any gas or vapor is known and it is necessary to compute the rated capacity of steam or air.

Molecular weights of some of the common gases and vapors are given in Table 11-1.

For hydrocarbon vapors, where the actual value of  $k$  is not known, the conservative value  $k = 1.001$  has been commonly used and the formula becomes

$$W = C K A P \sqrt{\frac{M}{T}}$$

where

$C = 315$  for U.S. Customary calculations

$C = 23.95$  for SI calculations

When desired, as in the case of light hydrocarbons, the compressibility factor  $Z$  may be included in the formulas for gases and vapors as follows:

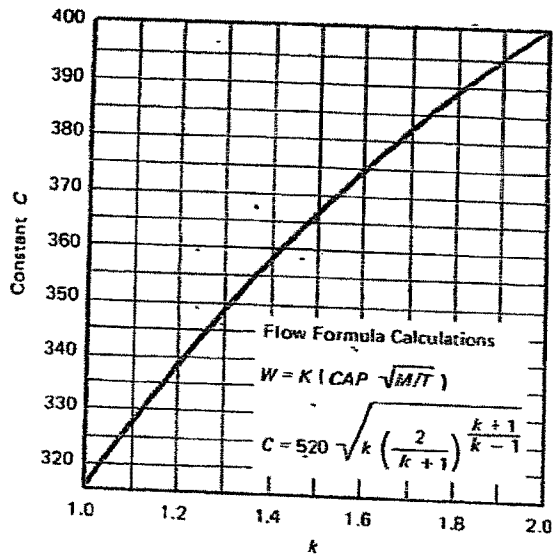
$$W = C K A P \sqrt{\frac{M}{ZT}}$$

#### Example 1

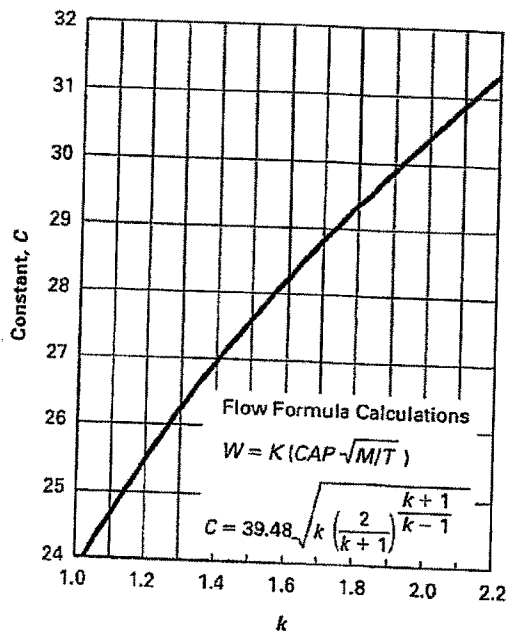
GIVEN: A safety valve bears a certified capacity rating of 3020 lb/hr of steam for a pressure setting of 200 psi.

PROBLEM: What is the relieving capacity of that valve in terms of air at 100°F for the same pressure setting?

Appendix 11 - G  
Page 1 of 4

FIG. 11-1 CONSTANT  $C$  FOR GAS OR VAPOR RELATED TO RATIO OF SPECIFIC HEATS ( $k = c_p/c_v$ )

$k$	Constant $C$	$k$	Constant $C$	$k$	Constant $C$
1.00	315	1.26	343	1.52	366
1.02	318	1.28	345	1.54	368
1.04	320	1.30	347	1.56	369
1.06	322	1.32	349	1.58	371
1.08	324	1.34	351	1.60	372
1.10	327	1.36	352	1.62	374
1.12	329	1.38	354	1.64	376
1.14	331	1.40	356	1.66	377
1.16	333	1.42	358	1.68	379
1.18	335	1.44	359	1.70	380
1.20	337	1.46	361	2.00	400
1.22	339	1.48	363	2.20	412
1.24	341	1.50	364	...	...

FIG. 11-1M CONSTANT  $C$  FOR GAS OR VAPOR RELATED TO RATIO OF SPECIFIC HEATS ( $k = c_p/c_v$ )

$k$	Constant $C$	$k$	Constant $C$	$k$	Constant $C$
1.001	23.95	1.26	26.05	1.52	27.80
1.02	24.12	1.28	26.20	1.54	27.93
1.04	24.30	1.30	26.34	1.56	28.05
1.06	24.47	1.32	26.49	1.58	28.17
1.08	24.64	1.34	26.63	1.60	28.29
1.10	24.81	1.36	26.76	1.62	28.40
1.12	24.97	1.38	26.90	1.64	28.52
1.14	25.13	1.40	27.03	1.66	28.63
1.16	25.29	1.42	27.17	1.68	28.74
1.18	25.45	1.44	27.30	1.70	28.86
1.20	25.60	1.46	27.43	2.00	30.39
1.22	25.76	1.48	27.55	2.20	31.29
1.24	25.91	1.50	27.68	...	...

Appendix B  
Page 2 of 4

TABLE 11-1  
MOLECULAR WEIGHTS OF GASES AND VAPORS

Air	28.97	Freon 22	86.48
Acetylene	26.04	Freon 114	170.90
Ammonia	17.03	Hydrogen	2.02
Butane	58.12	Hydrogen Sulfide	34.08
Carbon Dioxide	44.01	Methane	16.04
Chlorine	70.91	Methyl Chloride	50.48
Ethane	30.07	Nitrogen	28.02
Ethylene	28.05	Oxygen	32.00
Freon 11	137.371	Propane	44.09
Freon 12	120.9	Sulfur Dioxide	64.06

SOLUTION:

For steam,

$$W_s = 51.5 KAP$$

$$3,020 = 51.5 KAP$$

$$KAP = \frac{3,020}{51.5} = 58.5$$

For air

$$\begin{aligned} W_a &= CKAP \sqrt{\frac{M}{T}} \\ &= 356 KAP \sqrt{\frac{28.97}{460 + 100}} \\ &= (356)(58.5) \sqrt{\frac{28.97}{560}} \\ &= 4,750 \text{ lb/hr} \end{aligned}$$

### Example 2

GIVEN: It is required to relieve 5000 lb/hr of propane from a pressure vessel through a safety valve set to relieve at a pressure of  $P_s$ , psi, and with an inlet temperature at 125°F.

PROBLEM: What total capacity in pounds of steam per hour in safety valves must be furnished?

SOLUTION:

For propane,

$$W = CKAP \sqrt{\frac{M}{T}}$$

The value of  $C$  is not definitely known. Use the conservative value,  $C = 315$ .

$$5,000 = 315 KAP \sqrt{\frac{44.09}{460 + 125}}$$

$$KAP = 57.7$$

For steam,

$$W_s = 51.5 KAP = (51.5)(57.7)$$

$$= 2,970 \text{ lb/hr set to relieve at } P_s \text{ psi}$$

### Example 3

GIVEN: It is required to relieve 1,000 lb/hr of ammonia from a pressure vessel at 150°F.

PROBLEM: What is the required total capacity in pounds of steam per hour at the same pressure setting?

SOLUTION:

For ammonia,

$$W = CKAP \sqrt{\frac{M}{T}}$$

Manufacturer and user agree to use  $k = 1.33$ ; from Fig. 11-1,  $C = 350$ .

$$1,000 = 350 KAP \sqrt{\frac{17.03}{460 + 150}}$$

$$KAP = 17.10$$

For steam,

$$W_s = 51.5 KAP = 51.5 \times 17.10$$

$$= 880 \text{ lb/hr}$$

### Example 4

GIVEN: A safety valve bearing a certified rating of 10,000 cu ft/min of air at 60°F and 14.7 psia (atmospheric pressure).

PROBLEM: What is the flow capacity of this safety valve in pounds of saturated steam per hour for the same pressure setting?

SOLUTION:

For air: Weight of dry air at 60°F and 14.7 psia is 0.0766 lb/cu ft.

$$W_a = 10,000 \times 0.0766 \times 60 = 45,960 \text{ lb/hr}$$

$$45,960 = 356 KAP \sqrt{\frac{28.97}{460 + 60}}$$

$$KAP = 546$$

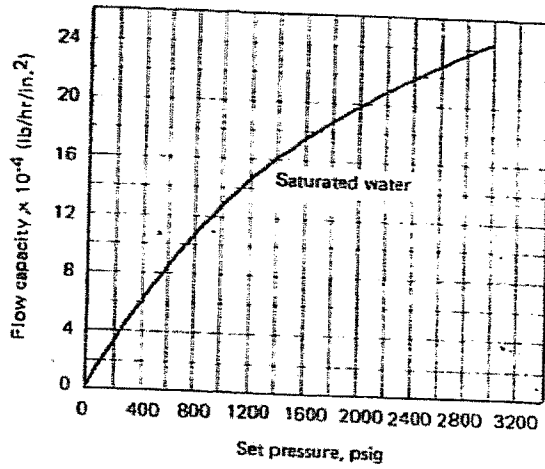
For steam,

$$W_s = 51.5 KAP = (51.5)(546)$$

$$= 28,200 \text{ lb/hr}$$

NOTE: Before converting the capacity of a safety valve from any gas to steam, the requirements of UG-131(b) must be met.

FIG. 11-2 FLOW CAPACITY CURVE FOR RATING NOZZLE TYPE SAFETY VALVES ON SATURATED WATER (BASED ON 10% OVERPRESSURE)

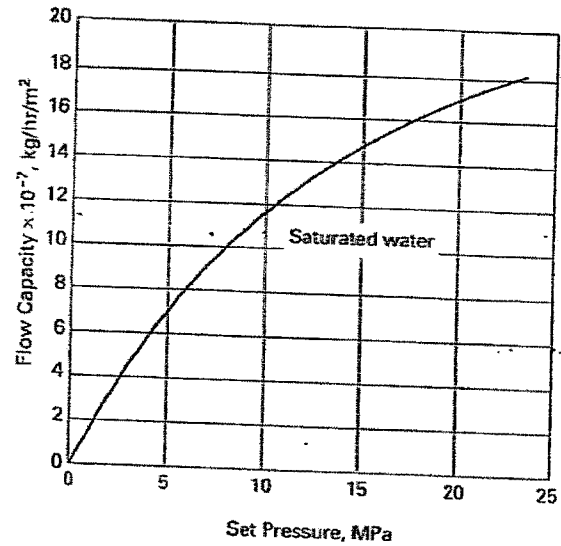


11-2

(a) Since it is realized that the saturated water capacity is configuration sensitive, the following applies only to those safety valves that have a nozzle type construction (throat to inlet diameter ratio of 0.25 to 0.80 with a continuously contoured change and have exhibited a coefficient  $K_D$  in excess of 0.90). No saturated water rating shall apply to other types of construction.

NOTE: The manufacturer, user, and inspector are all cautioned that for the following rating to apply, the valve shall be continuously subjected to saturated water. If, after initial relief the flow media changes to quality steam, the valve shall be rated as per dry saturated steam. Valves installed

FIG. 11-2M FLOW CAPACITY CURVE FOR RATING NOZZLE TYPE SAFETY VALVES ON SATURATED WATER (BASED ON 10% OVERPRESSURE)



on vessels or lines containing steam-water mixture shall be rated on dry saturated steam.

(b) To determine the saturated water capacity of a valve currently rated under UG-131 and meeting the requirements of (a) above, refer to Fig. 11-2. Enter the graph at the set pressure of the valve, move vertically upward to the saturated water line and read horizontally the relieving capacity. This capacity is the theoretical, isentropic value arrived at by assuming equilibrium flow and calculated values for the critical pressure ratio.

Appendix G  
Page 4 of 4

EAP

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PSM  
Training

(b) (7)(D)

[illegible][illegible]

Page No. 2  
Run Date 07/06/2016  
Run Time 13:59:31

**DOLPOWER000294**

Course 018313 Ammonia System Operator Train

Course Number: 018313, All Types, All Sessions

Run Time 13:59:31

[illegible]

(b) (7)(D)

Page No. 4  
Run Date 07/06/2016  
Run Time 13:59:31

[illegible]

(b) (7)(D)

Report ID: TRN022  
User ID : WB030621  
Course 018313 Ammonia System Operator Train

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STATISTICS OF EMPLOYEES ENROLLED  
Course Number: 018313, All Types, All Sessions

Page No. 5  
Run Date 07/06/2016  
Run Time 13:59:33

EmplId	Name	Course	Description	Attendance	Session	Begin	End	Session Hrs	Course Type	Compl
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(b) (7)(D)

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018313	Ammonia System Operator Train	Completed	0122	12/14/2015	12/14/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0122	12/14/2015	12/14/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0122	12/14/2015	12/14/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0130	12/16/2015	12/16/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0131	12/20/2015	12/20/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0131	12/20/2015	12/20/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0131	12/20/2015	12/20/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0131	12/20/2015	12/20/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0131	12/20/2015	12/20/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0132	12/30/2015	12/30/2015	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0137	01/14/2016	01/14/2016	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0137	01/14/2016	01/14/2016	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0138	01/22/2016	01/22/2016	1.00	Contin Ed	N
018313	Ammonia System Operator Train	Completed	0152	03/11/2016	03/11/2016	1.00	Contin Ed	N

Course	-----	-----
018313 Ammonia System Operator Train	191	281.00
Grand Total	----- 191	----- 281.00

End of Report

Ammonia  
Unloading  
Training

Report ID: TRN022  
User ID : WB030621  
Course 012846 SG/SCR Ammonia Unloading/Stora

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STATISTICS OF EMPLOYEES ENROLLED  
Course Number: 012846, All Types, All Sessions

Page No. 1  
Run Date 07/06/2016  
Run Time 14:02:55

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		012846	SG/SCR Ammonia Unloading/Stora	Completed	0026	04/08/2014	04/08/2014	8.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0028	05/01/2014	05/01/2014	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0027	05/13/2014	05/13/2014	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0027	05/13/2014	05/13/2014	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0029	03/03/2015	03/03/2015	3.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0030	03/03/2015	03/03/2015	1.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0031	02/29/2016	02/29/2016	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0031	02/29/2016	02/29/2016	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0031	02/29/2016	02/29/2016	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0031	02/29/2016	02/29/2016	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0031	02/29/2016	02/29/2016	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0031	02/29/2016	02/29/2016	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0031	02/29/2016	02/29/2016	4.00	Technical	N
		012846	SG/SCR Ammonia Unloading/Stora	Completed	0032	05/09/2016	05/09/2016	4.00	Technical	N

Course  
012846 SG/SCR Ammonia Unloading/Stora

16

68.00

Grand Total

16

68.00

End of Report

MI

HOT WORK

PM - work order

## 8 Mechanical Integrity

8.1	PURPOSE -----	8-1
8.2	SCOPE -----	8-1
8.3	RESPONSIBILITIES -----	8-2
8.4	PROCEDURE -----	8-2
	8.4.1 Identification of Critical Equipment -----	8-2
	8.4.2 Plant Maintenance, Inspection and Testing Schedule and Procedures -----	8-2
	8.4.3 Maintenance Tracking -----	8-3
	8.4.4 Preventive Maintenance-----	8-3
8.5	TRAINING -----	8-4
8.6	EQUIPMENT DEFICIENCIES-----	8-4
8.7	QUALITY ASSURANCE -----	8-4
8.8	RECORDKEEPING -----	8-5

pm & work orders

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

(b) (4)

BWN-0410.000

Plant Bowen

PRB Approval Date

3/5/2015

Signature:

*Brenda Southerland*

Name

*Brenda Southerland*

Title

Compliance & Support Manager

Date:

3-5-15

Signature:

*Brandon Dillard*

Name

*Brandon Dillard*

Title

Plant Manager

Date:

3/6/2015

# **BWN-0410.00 HOT WORK SITE SPECIFIC INSTRUCTIONS**

## **REVISION 1**

---

If you are working with a printed copy of this document, it is not a controlled copy. Check online for the most recent version or here:

S:\Workgroups\GPC Plant Bowen\Policies, Processes and Procedures\Compliance\Safety\BWN  
0410.00 Hot Work Site Specific

---

300 log  
Facility layout

# OSHA's Form 300A

## Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

### Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	1	0
(G)	(H)	(I)	(J)

### Number of Days

Total number of days of job transfer or restriction	Total number of days away from work
7	0
(K)	(L)

### Injury and Illness Types

Total number of...			
(M)			
Injury	1	(4) Poisoning	0
Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All other illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this office.

Year 2016



U.S. Department of Labor  
Occupational Safety and Health Administration  
Form approved OMB no. 1218-0178

### Establishment information

Your establishment name Georgia Power Company - Plant Bowen  
Street 317 Covered Bridge Rd  
City Euharlee State Georgia Zip 30120-5907  
Industry description (e.g., Manufacture of motor truck trailers)  
Power Generation Facility  
Standard Industrial Classification (SIC), if known (e.g., SIC 3715)  
4 9 1 1

### Employment information

Annual average number of employees 437  
Total hours worked by all employees last year 875,748

### Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

_____ Company executive	_____ Plant Manager Title
_____ 770-606-6411 Phone	_____ Date

# OSHA's Form 300

## Log of Work-Related Injuries and Illnesses

**Attention:** This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 2016

**U.S. Department of Labor**  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name Georgia Power Company - Plant Bowen

City Euharlee State Georgia

Identify the person

Describe the case

Classify the case

(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from acetylene torch)	Using these categories, check ONLY the most serious result for each case:		Enter the number of days the injured or ill worker was:		Check the "Injury" column or choose one type of illness:							
						Death	Days away from work	Remained at work	On job transfer or restriction (days)	Away from work (days)	(M) Injury	Skin Disorder	Respiratory Condition	Poisoning	Hearing Loss	All other illnesses	
						(G)	(H)	Job transfer or restriction	Other recordable cases	(K)	(L)	(1)	(2)	(3)	(4)	(5)	(6)
(b) (7)(D)								1									
2																	
3																	
4																	
5																	
Page totals						0	0	1	0	8	0	1	0	0	0	0	0

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

The reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

Page 1 of 1

Injury  
(1)

Skin Disorder  
(2)

Respiratory Condition  
(3)

Poisoning  
(4)

Hearing Loss  
(5)

All other illnesses  
(6)

# OSHA's Form 300A

## Summary of Work-Related Injuries and Illnesses

Year 2015

U.S. Department of Labor  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

### Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
<u>0</u>	<u>1</u>	<u>5</u>	<u>10</u>
(G)	(H)	(I)	(J)

### Number of Days

Total number of days of job transfer or restriction	Total number of days away from work
<u>263</u>	<u>12</u>
(K)	(L)

### Injury and Illness Types

Total number of... (M)			
(1) Injury	<u>6</u>	(4) Poisoning	<u>0</u>
(2) Skin Disorder	<u>0</u>	(5) Hearing Loss	<u>10</u>
(3) Respiratory Condition	<u>0</u>	(6) All other illnesses	<u>0</u>

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this office.

### Establishment information

Your establishment name Georgia Power Company - Plant Bowen

Street 317 Covered Bridge Rd

City Euharlee State Georgia Zip 30120-5907

Industry description (e.g., Manufacture of motor truck trailers)  
Power Generation Facility

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)  
4 9 1 1

### Employment information

Annual average number of employees 437

Total hours worked by all employees last year 875,748

### Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

[Signature]  
Company executive

Plant Manager  
Title

770-606-6411  
Phone

1/28/16  
Date

# OSHA's Form 300

## Log of Work-Related Injuries and Illnesses

**Attention:** This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 2015



**U.S. Department of Labor**  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name Georgia Power Company - Plant Bowen  
City Euharlee State Georgia

Identify the person		Describe the case		Classify the case		Enter the number of days the injured or ill worker was:		Check the "injury" column or choose one type of illness:								
(A) Case No.	(B) Employee's Name	(C) Job Title (e.g., Welder)	(D) Date of injury or onset of illness (mo./day)	(E) Where the event occurred (e.g., Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Second degree burns on right forearm from acetylene torch)	Using these categories, check ONLY the most serious result for each case:	On job transfer or restriction (days)	Away from work (days)	Injury	Skin Disorder	Respiratory Condition	Poisoning	All other illnesses			
(G)	(H)	(I)	(J)	(K)	(L)	(1)	(2)	(3)	(4)	(5)						
(b) (7)(D)						Death										
						Days away from work										
						Remained at work										
						Job transfer or restriction										
						Other recordable cases										
							97		X							
							38		X							
							20		X							
							12		X							
							5		X							
<b>Page totals</b>						0	0	5	0	172	0	5	0	0	0	0

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

Public reporting burden for this collection of information is estimated to average 14 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

# OSHA's Form 300A (Rev. 01/2004)

## Summary of Work-Related Injuries and Illnesses

Year 2014



U.S. Department of Labor  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

### Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
<u>0</u>	<u>0</u>	<u>1</u>	<u>14</u>
(G)	(H)	(I)	(J)

### Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
<u>0</u>	<u>56</u>
(K)	(L)

### Injury and Illness Types

Total number of...		
(M)		
(1) Injury	<u>2</u>	(4) Poisoning <u>0</u>
(2) Skin Disorder	<u>0</u>	(5) Hearing Loss <u>13</u>
(3) Respiratory Condition	<u>0</u>	(6) All Other Illnesses <u>0</u>

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this

### Establishment information

Your establishment name Georgia Power Company - Plant Bowen

Street 317 Covered Bridge Road

City Cartersville State Georgia Zip 30120

Industry description (e.g., Manufacture of motor truck trailers)  
Electric Utility

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)

4 9 1 1

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

### Employment information

Annual average number of employees 424

Total hours worked by all employees last year 849,696

### Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Bruce Smith  
Company executive

PLT Manager  
Title

770 606-6411  
Phone

1/29/15  
Date



# OSHA's Form 300A (Rev. 01/2004)

## Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0".

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

### Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	2	12
(G)	(H)	(I)	(J)

### Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0	142
(K)	(L)

### Injury and Illness Types

Total number of...  
(M)

(1) Injury	2	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	12
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave. NW, Washington, DC 20210. Do not send the completed forms to this

Year 2013



U.S. Department of Labor  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0170

### Establishment information

Your establishment name Georgia Power Company - Plant Bowen

Street 317 Covered Bridge Road

City Cartersville State Georgia Zip 30120

Industry description (e.g., Manufacture of motor truck trailers)  
Electric Utility

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)

4 9 1 1

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

### Employment information

Annual average number of employees 402

Total hours worked by all employees last year 805,608

### Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

John B.  
Company executive

770-606-6411  
Phone

PERMANAGER  
Title  
1/30/14  
Date

## Log of Work-Related Injuries and Illnesses

You must record information about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an injury and illness incident report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

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**U.S. Department of Labor**  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

Establishment name Georgia Power Company - Plant Bowen

City      Cartersville      State      Georgia

Identify the person

Describe the case

Classify the case

[illegible]

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

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Page 1 of 1

(1)      (2)      (3)      (4)      (5)      (6)

Field Notes

Interview

EE Interviews

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

- Review operation manual 2041

- PHA - Initial 2001  
Review

MI - Review

emergency route - Unit 3

Operator Log Book -

↑ Sup  
Robert H  
Call on Duty

(b) (7)(D)



any

Inspection Location

Inspection Number

Things left to do

outstanding  
DOE

- Hot work Permit
- Inform of unit start up
- Re train employees

- Who is Responsible inform ee of hazard in work area

1910.119 h 3 i

Lead <sup>Southern</sup> Kirk Shelby / Plant Responsible  
\* Operator Team / Unit 3-4 Team  
for Plant Problem

- Why employees were sent for further evaluation  
It is obvious some had issues by repeated visit to clinic

- Who is (b) (7)(D)

Brandon Dillard - Plant Mgr b7 Power  
Shawn Stahl - ~~Southern~~ Safety Mgr

was present  
no idea that rose was aware

(b) (7)(D)

(b) (7)(D)

4 ee's prior to incident

- Awareness training for (b) (7)(D)

(b) (7)(D)

correct - ee were on site earlier in process

determined it was an issue & went back & retrain

with ee went to orientation after 2014 additional training

- Any additional incident report (Southern or National)

- Awareness Refresher not Dated, who did training

3 wks - 4 wks

ee not on site with

Southern Co

46 ee's on site  
Supervision of Contractor

Date Site Done

CPL

OSHA 84 (4/84)

Recen

EAP - Alarm

Review EAP & can't speculate  
amount

Ted

1099635

Present

(b) (7)(D)

11:00

Closing Conf Charlotte

Draft  
Flux

EHP - Alarm Suple

Investigation Resp

not detail to  
be value

+ correction

- sensor - 56

- Reval detector

audit Recommendation

Correct

- Failure to close valve prior to start up and perform safety/health check to assure valve alignment was properly position

Follow operating Procedures involving valve alignment

Switch out

Process  
update

Procedure

after Review

19-2-1

- Failure to inform contract workers of the start up of Unit 3 when unit was introduced into the SCR

- Investigation of incident occurs 4/11/16 did not include contract

Include  
Contract

personnel to include that adequate enforcement & other parameters were identified & covering regarding & may reflect contracted worker

- PAXA did not address Resolution from initial operational Procedure for 33 & 34 Listed as unresolved

ASIC when drafted

# Note Taking Sheet

U.S. Department of Labor  
Occupational Safety and Health Administration

Company

Inspection Location

Inspection Number

- 2 -

~ Operations Procedure Start up +  
following a turn round was not  
Reviewed an updated <sup>certified annually</sup> annual to  
Reflect appropriate value established

Review operation Procedures

= Sensor Place Strategically

~~Time~~ Pattern

- Liquid Flow to lower level  
open drain floor covered most  
location

- drains could allow leakage to personnel  
on lower levels

if  
no way to track the amt  
of Vapors and/or lg to adequate  
identify exposure levels to  
main personnel

3 day Posting

15 day Int Conf / Contest Period

P Modification of Abatement Date to Correct to

Follow-up

Telesite Int [www.OSHA.gov](http://www.OSHA.gov)  
KIC Protection - Whistleblow

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

# Note Taking Sheet

U. S. Department of Labor  
Occupational Safety and Health Administration

Company

Inspection Location

Inspection Number

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

Jim Patten, North Reg Safety Lead Project,  
317 Covered Bridge Rd  
Euharlee, Ga 30120 ph # \_\_\_\_\_ employed  
Southern Company  
Engineering & Construction Services  
EE # 250  
nationwide 2000 non-union

Mr. Patten stated that ~~located~~ he was in  
Birmingham ALA. He stated (b) (7)(D) notified  
him that Release had occurred April 11, 2016  
Mr. Patten stated he was conducting training  
for Southern in AL.

Mr. Patten stated he was providing oversight  
of Contractor. M. Patten stated that (b) (7)(D)  
(b) (7)(D) (b) (7)(D) for Southern Co.  
(b) (7)(D) co-ordinated work for  
NSC. Mr. Patten stated NSC workers was

during turnaround on a scheduled  
Rebuilding Air Reheater (Boiler) Rebuilding & Piping  
Repair. EE was in area ~ not sure of # of days  
not sure how long it would take  
Mr. Patten stated he was involved in NH<sub>3</sub> Release  
in past unloading Ag ammonia. Was not aware  
it was being unloaded.

Mr. Patten indicated he works E-Group  
Staffing Agency (b) (7)(D) (b) (7)(D)  
1st notice of this under (CSHO) Mr. Patten  
work for Southern Company

Georgia Power Co.

Jed Burnley - Safety + Health Coordinator

Kate Nichols Industrial Hygiene Mgr.

Latasha James Compliance Team Leader

TIM PATTEN

PROJECT SAFETY LEAD  
SOUTHERN COMPANY SERVICES

# OPENING

4/27/11  
4/27/16  
~45 miles from office



INSPECTION # \_\_\_\_\_  
DATE \_\_\_\_\_

DATE \_\_\_\_\_

- Highest ranking official
- Credentials
- Union Representative
- Explain - purpose, nature, and scope of inspection
  - If programmed - provide a copy of explanation letter
  - If complaint - provide copy of complaint
  - If other (i.e., referral, follow-up, etc.) explain
- Obtain employer's consent to conduct inspection
- Determine if there are any limitations (i.e., size, interstate commerce consideration in progress, etc.)
- Fill out OSHA 1 and 1A
- Inform the employer of: Opening, walk-around, possible sampling, private employee interviews, picture taking, trade secrets, etc.)
- Review OSHA 300's and other applicable records
- Gather basic information about the operation/type of possible hazards
- Request a draft flow chart or plant lay-out
- Review Hazard Communication Program and General Health and Safety Program
- Review Confined Spaces Program (if applicable)
- Review Lock-Out/Tag-Out Procedures (if applicable)
- Request chemical inventory list
- Determine if any contractors are on-site
- Questions
- Check for Personal Protective Equipment requirements

La Tasha  
Sames  
Comp Team  
Leader

awaiting approval  
Ted  
Birnley  
Compliance  
Coordinator  
Safety Admin  
Kearns  
Johnson  
CO. Safety  
Manager

Adm note  
Melanie Arline  
Compliance  
Specialist

300 log  
H.C.  
SDS  
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300  
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2015  
2014  
2013  
2016

SDS  
HC

\* Report - 1st Report

Pneumonia msp

EPA?

## CLOSING

- Describe apparent violations (state that they will be reviewed by supervisor and Area Director) and applicable standards
- Discuss strengths and weaknesses of employer's safety/health program
- Note employer's comments of OSHA 120
- Obtain input on abatement dates
- Give a copy of Employer Rights (3000) and discuss to detail
- Explain Employee rights to participate in subsequent conferences, etc.
- Explain Employee rights - party status in contest, D(c), contesting of abatement dates, etc.

## POST INSPECTION

- Citations, Penalties, Informal Conference, Contest, Abatement Notification, PMA (Petition for Modification of Abatement)

Ted  
454 834 2379

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1. Date	2. Agency ID	3. OSHA ID	4. Federal Report Number	5. Inspection Number 109304337
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6. Related Activity/Establishment	7. Number	8. Existing	9. Type	10. Number	11. Establisher	12. Type	13. Number	14. Subtype	15. Total Inspected
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16. Previous Activity

17. Is there a past OSHA activity at this establishment?

18. Yes ☐ No ☐

19. a. ☐ b. Establishment Name: Georgia Power Company

20. a. ☐ b. Site Address (Street, City, State, ZIP): 317 Euhawkee Rd

21. City Code: 70-6065260

22. Zip Code: 30120

23. Name of Controlling Concern: Southern Company - Atlanta

24. a. ☐ Private Sector b. ☐ State Government c. ☐ Federal Government

25. Will anyone receive notice of this inspection?

26. Inspecting Concern: Yes ☐ No ☒

27. a. ☐ b. ☐ c. ☐ d. ☐ e. ☐ f. ☐ g. ☐ h. ☐ i. ☐ j. ☐ k. ☐ l. ☐ m. ☐ n. ☐ o. ☐ p. ☐ q. ☐ r. ☐ s. ☐ t. ☐ u. ☐ v. ☐ w. ☐ x. ☐ y. ☐ z. ☐ aa. ☐ ab. ☐ ac. ☐ ad. ☐ ae. ☐ af. ☐ ag. ☐ ah. ☐ ai. ☐ aj. ☐ ak. ☐ al. ☐ am. ☐ an. ☐ ao. ☐ ap. ☐ aq. ☐ ar. ☐ as. ☐ at. ☐ au. ☐ av. ☐ aw. ☐ ax. ☐ ay. ☐ az. ☐ ba. ☐ bb. ☐ bc. ☐ bd. ☐ be. ☐ bf. ☐ bg. ☐ bh. ☐ bi. ☐ bj. ☐ bk. ☐ bl. ☐ bm. ☐ bn. ☐ bo. ☐ bp. ☐ bq. ☐ br. ☐ bs. ☐ bt. ☐ bu. ☐ bv. ☐ bw. ☐ bx. ☐ by. ☐ bz. ☐ ca. ☐ cb. ☐ cc. ☐ cd. ☐ ce. ☐ cf. ☐ cg. ☐ ch. ☐ ci. ☐ cj. ☐ ck. ☐ cl. ☐ cm. ☐ cn. ☐ co. ☐ cp. ☐ cq. ☐ cr. ☐ cs. ☐ ct. ☐ cu. ☐ cv. ☐ cw. ☐ cx. ☐ cy. ☐ cz. ☐ da. ☐ db. ☐ dc. ☐ dd. ☐ de. ☐ df. ☐ dg. ☐ dh. ☐ di. ☐ dj. ☐ dk. ☐ dl. ☐ dm. ☐ dn. ☐ do. ☐ dp. ☐ dq. ☐ dr. ☐ ds. ☐ dt. ☐ du. ☐ dv. ☐ dw. ☐ dx. ☐ dy. ☐ dz. ☐ ea. ☐ eb. ☐ ec. ☐ ed. ☐ ee. ☐ ef. ☐ eg. ☐ eh. ☐ ei. ☐ ej. ☐ ek. ☐ el. ☐ em. ☐ en. ☐ eo. ☐ ep. ☐ eq. ☐ er. ☐ es. ☐ et. ☐ eu. ☐ ev. ☐ ew. ☐ ex. ☐ ey. ☐ ez. ☐ fa. ☐ fb. ☐ fc. ☐ fd. ☐ fe. ☐ ff. ☐ fg. ☐ fh. ☐ fi. ☐ fj. ☐ fk. ☐ fl. ☐ fm. ☐ fn. ☐ fo. ☐ fp. ☐ fq. ☐ fr. ☐ fs. ☐ ft. ☐ fu. ☐ fv. ☐ fw. ☐ fx. ☐ fy. ☐ fz. ☐ ga. ☐ gb. ☐ gc. ☐ gd. ☐ ge. ☐ gf. ☐ gh. ☐ gi. ☐ gj. ☐ gk. ☐ gl. ☐ gm. ☐ gn. ☐ go. ☐ gp. ☐ gq. ☐ gr. ☐ gs. ☐ gt. ☐ gu. ☐ gv. ☐ gw. ☐ gx. ☐ gy. ☐ gz. ☐ ha. ☐ hb. ☐ hc. ☐ hd. ☐ he. ☐ hf. ☐ hg. ☐ hh. ☐ hi. ☐ hj. ☐ hk. ☐ hl. ☐ hm. ☐ hn. ☐ ho. ☐ hp. ☐ hq. ☐ hr. ☐ hs. ☐ ht. ☐ hu. ☐ hv. ☐ hw. ☐ hx. ☐ hy. ☐ hz. ☐ ia. ☐ ib. ☐ ic. ☐ id. ☐ ie. ☐ if. ☐ ig. ☐ ih. ☐ ii. ☐ ij. ☐ ik. ☐ il. ☐ im. ☐ in. ☐ io. ☐ ip. ☐ iq. ☐ ir. ☐ is. ☐ it. ☐ iu. ☐ iv. ☐ iw. ☐ ix. ☐ iy. ☐ iz. ☐ ja. ☐ jb. ☐ jc. ☐ jd. ☐ je. ☐ jf. ☐ jg. ☐ jh. ☐ ji. ☐ jj. ☐ jk. ☐ jl. ☐ jm. ☐ jn. ☐ jo. ☐ jp. ☐ jq. ☐ jr. ☐ js. ☐ jt. ☐ ju. ☐ jv. ☐ jw. ☐ jx. ☐ jy. ☐ jz. ☐ ka. ☐ kb. ☐ kc. ☐ kd. ☐ ke. ☐ kf. ☐ kg. ☐ kh. ☐ ki. ☐ kj. ☐ kk. ☐ kl. ☐ km. ☐ kn. ☐ ko. ☐ kp. ☐ kq. ☐ kr. ☐ ks. ☐ kt. ☐ ku. ☐ kv. ☐ kw. ☐ kx. ☐ ky. ☐ kz. ☐ la. ☐ lb. ☐ lc. ☐ ld. ☐ le. ☐ lf. ☐ lg. ☐ lh. ☐ li. ☐ lj. ☐ lk. ☐ ll. ☐ lm. ☐ ln. ☐ lo. ☐ lp. ☐ lq. ☐ lr. ☐ ls. ☐ lt. ☐ lu. ☐ lv. ☐ lw. ☐ lx. ☐ ly. ☐ lz. ☐ ma. ☐ mb. ☐ mc. ☐ md. ☐ me. ☐ mf. ☐ mg. ☐ mh. ☐ mi. ☐ mj. ☐ mk. ☐ ml. ☐ mm. ☐ mn. ☐ mo. ☐ mp. ☐ mq. ☐ mr. ☐ ms. ☐ mt. ☐ mu. ☐ mv. ☐ mw. ☐ mx. ☐ my. ☐ mz. ☐ na. ☐ nb. ☐ nc. ☐ nd. ☐ ne. ☐ nf. ☐ ng. ☐ nh. ☐ ni. ☐ nj. ☐ nk. ☐ nl. ☐ nm. ☐ nn. ☐ no. ☐ np. ☐ nq. ☐ nr. ☐ ns. ☐ nt. ☐ nu. ☐ nv. ☐ nw. ☐ nx. ☐ ny. ☐ nz. ☐ oa. ☐ ob. ☐ oc. ☐ od. ☐ oe. ☐ of. ☐ og. ☐ oh. ☐ oi. ☐ oj. ☐ ok. ☐ ol. ☐ om. ☐ on. ☐ oo. ☐ op. ☐ oq. ☐ or. ☐ os. ☐ ot. ☐ ou. ☐ ov. ☐ ow. ☐ ox. ☐ oy. ☐ oz. ☐ pa. ☐ pb. ☐ pc. ☐ pd. ☐ pe. ☐ pf. ☐ pg. ☐ ph. ☐ pi. ☐ pj. ☐ pk. ☐ pl. ☐ pm. ☐ pn. ☐ po. ☐ pp. ☐ pq. ☐ pr. ☐ ps. ☐ pt. ☐ pu. ☐ pv. ☐ pw. ☐ px. ☐ py. ☐ pz. ☐ qa. ☐ qb. ☐ qc. ☐ qd. ☐ qe. ☐ qf. ☐ qg. ☐ qh. ☐ qi. ☐ qj. ☐ qk. ☐ ql. ☐ qm. ☐ qn. ☐ qo. ☐ qp. ☐ qq. ☐ qr. ☐ qs. ☐ qt. ☐ qu. ☐ qv. ☐ qw. ☐ qx. ☐ qy. ☐ qz. ☐ ra. ☐ rb. ☐ rc. ☐ rd. ☐ re. ☐ rf. ☐ rg. ☐ rh. ☐ ri. ☐ rj. ☐ rk. ☐ rl. ☐ rm. ☐ rn. ☐ ro. ☐ rp. ☐ rq. ☐ rr. ☐ rs. ☐ rt. ☐ ru. ☐ rv. ☐ rw. ☐ rx. ☐ ry. ☐ rz. ☐ sa. ☐ sb. ☐ sc. ☐ sd. ☐ se. ☐ sf. ☐ sg. ☐ sh. ☐ si. ☐ sj. ☐ 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☐ lt. ☐ lu. ☐ lv. ☐ lw. ☐ lx. ☐ ly. ☐ lz. ☐ ma. ☐ mb. ☐ mc. ☐ md. ☐ me. ☐ mf. ☐ mg. ☐ mh. ☐ mi. ☐ mj. ☐ mk. ☐ ml. ☐ mm. ☐ mn. ☐ mo. ☐ mp. ☐ mq. ☐ mr. ☐ ms. ☐ mt. ☐ mu. ☐ mv. ☐ mw. ☐ mx. ☐ my. ☐ mz. ☐ na. ☐ nb. ☐ nc. ☐ nd. ☐ ne. ☐ nf. ☐ ng. ☐ nh. ☐ ni. ☐ nj. ☐ nk. ☐ nl. ☐ nm. ☐ nn. ☐ no. ☐ np. ☐ nq. ☐ nr. ☐ ns. ☐ nt. ☐ nu. ☐ nv. ☐ nw. ☐ nx. ☐ ny. ☐ nz. ☐ oa. ☐ ob. ☐ oc. ☐ od. ☐ oe. ☐ of. ☐ og. ☐ oh. ☐ oi. ☐ oj. ☐ ok. ☐ ol. ☐ om. ☐ on. ☐ oo. ☐ op. ☐ oq. ☐ or. ☐ os. ☐ ot. ☐ ou. ☐ ov. ☐ ow. ☐ ox. ☐ oy. ☐ oz. ☐ pa. ☐ pb. ☐ pc. ☐ pd. ☐ pe. ☐ pf. ☐ pg. ☐ ph. ☐ pi. ☐ pj. ☐ pk. ☐ pl. ☐ pm. ☐ pn. ☐ po. ☐ pp. ☐ pq. ☐ pr. ☐ ps. ☐ pt. ☐ pu. ☐ pv. ☐ pw. ☐ px. ☐ py. ☐ pz. ☐ qa. ☐ qb. ☐ qc. ☐ qd. ☐ qe. ☐ qf. ☐ qg. ☐ qh. ☐ qi. ☐ qj. ☐ qk. ☐ ql. ☐ qm. ☐ qn. ☐ qo. ☐ qp. ☐ qq. ☐ qr. ☐ qs. ☐ qt. ☐ qu. ☐ qv. ☐ qw. ☐ qx. ☐ qy. ☐ qz. ☐ ra. ☐ rb. ☐ rc. ☐ rd. ☐ re. ☐ rf. ☐ rg. ☐ rh. ☐ ri. ☐ rj. ☐ rk. ☐ rl. ☐ rm. ☐ rn. ☐ ro. ☐ rp. ☐ rq. ☐ rr. ☐ rs. ☐ rt. ☐ ru. ☐ rv. ☐ rw. ☐ rx. ☐ ry. ☐ rz. ☐ sa. ☐ sb. ☐ sc. ☐ sd. ☐ se. ☐ sf. ☐ sg. ☐ sh. ☐ si. ☐ sj. ☐ sk. ☐ sl. ☐ sm. ☐ sn. ☐ so. ☐ sp. ☐ sq. ☐ sr. ☐ ss. ☐ st. ☐ su. ☐ sv. ☐ sw. ☐ sx. ☐ sy. ☐ sz. ☐ ta. ☐ tb. ☐ tc. ☐ td. ☐ te. ☐ tf. ☐ tg. ☐ th. ☐ ti. ☐ tj. ☐ tk. ☐ tl. ☐ tm. ☐ tn. ☐ to. ☐ tp. ☐ tq. ☐ tr. ☐ ts. ☐ tu. ☐ tv. ☐ tw. ☐ tx. ☐ ty. ☐ tz. ☐ ua. ☐ ub. ☐ uc. ☐ ud. ☐ ue. ☐ uf. ☐ ug. ☐ uh. ☐ ui. ☐ uj. ☐ uk. ☐ ul. ☐ um. ☐ un. ☐ uo. ☐ up. ☐ uq. ☐ ur. ☐ us. ☐ ut. ☐ uu. ☐ uv. ☐ uw. ☐ ux. ☐ uy. ☐ uz. ☐ va. ☐ vb. ☐ vc. ☐ vd. ☐ ve. ☐ vf. ☐ vg. ☐ vh. ☐ vi. ☐ vj. ☐ vk. ☐ vl. ☐ vm. ☐ vn. ☐ vo. ☐ vp. ☐ vq. ☐ vr. ☐ vs. ☐ vt. ☐ vu. ☐ vv. ☐ vw. ☐ vx. ☐ vy. ☐ vz. ☐ wa. ☐ wb. ☐ wc. ☐ wd. ☐ we. ☐ wf. ☐ wg. ☐ wh. ☐ wi. ☐ wj. ☐ wk. ☐ wl. ☐ wm. ☐ wn. ☐ wo. ☐ wp. ☐ wq. ☐ wr. ☐ ws. ☐ wt. ☐ wu. ☐ wv. ☐ ww. ☐ wx. ☐ wy. ☐ wz. ☐ xa. ☐ xb. ☐ xc. ☐ xd. ☐ xe. ☐ xf. ☐ xg. ☐ xh. ☐ xi. ☐ xj. ☐ xk. ☐ xl. ☐ xm. ☐ xn. ☐ xo. ☐ xp. ☐ xq. ☐ xr. ☐ xs. ☐ xt. ☐ xu. ☐ xv. ☐ xw. ☐ xx. ☐ xy. ☐ xz. ☐ ya. ☐ yb. ☐ yc. ☐ yd. ☐ ye. ☐ yf. ☐ yg. ☐ yh. ☐ yi. ☐ yj. ☐ yk. ☐ yl. ☐ ym. ☐ yn. ☐ yo. ☐ yp. ☐ yq. ☐ yr. ☐ ys. ☐ yt. ☐ yu. ☐ yv. ☐ yw. ☐ yx. ☐ yy. ☐ yz. ☐ za. ☐ zb. ☐ zc. ☐ zd. ☐ ze. ☐ zf. ☐ zg. ☐ zh. ☐ zi. ☐ zj. ☐ zk. ☐ zl. ☐ zm. ☐ zn. ☐ zo. ☐ zp. ☐ zq. ☐ zr. ☐ zs. ☐ zt. ☐ zu. ☐ zv. ☐ zw. ☐ zx. ☐ zy. ☐ zz. ☐ aa. ☐ ab. ☐ ac. ☐ ad. ☐ ae. ☐ af. ☐ ag. ☐ ah. ☐ ai. ☐ aj. ☐ ak. ☐ al. ☐ am. ☐ an. ☐ ao. ☐ ap. ☐ aq. ☐ ar. ☐ as. ☐ at. ☐ au. ☐ av. ☐ aw. ☐ ax. ☐ ay. ☐ az. ☐ ba. ☐ bb. ☐ bc. ☐ bd. ☐ be. ☐ bf. ☐ bg. ☐ bh. ☐ bi. ☐ bj. ☐ bk. ☐ bl. ☐ bm. ☐ bn. ☐ bo. ☐ bp. ☐ bq. ☐ br.



1. Establishment Name		2. Inspection Number	
3. Type of Legal Entity		4. Type of Business or Plant	
5. Additional Citation Mailing Addresses (1) Name _____ Apt _____ Street Address _____ City _____ State _____ Zip _____		(2) Name _____ Apt _____ Street Address _____ City _____ State _____ Zip _____	

6. Names and Addresses of All Organized Employee Groups		C M	7. Authorized Representatives of Employees		W A
Name		<input type="checkbox"/> Y	Name	Tele. No.	<input type="checkbox"/> Y
Local No.	Tele. No.		Organization	Title	
Address			Home Address		
	Zip Code			Zip Code	
Name		<input type="checkbox"/> Y	Name	Tele. No.	<input type="checkbox"/> Y
Local No.	Tele. No.		Organization	Title	
Address			Home Address		
	Zip Code			Zip Code	

Employer Represent- 1- Credentials Presented C- Closing Conf. M- Other Means Official atives Contacted: O- Opening Conf.			W A	8. Other Persons Contacted:	
Name	Title	Function	<input type="checkbox"/> Y	Name, Occupation & Affiliation	
			<input type="checkbox"/> Y	Home Address	
			<input type="checkbox"/> Y	Tele. No.	
			<input type="checkbox"/> Y	Zip Code	
Coverage Information			<input type="checkbox"/> Y	Name, Occupation & Affiliation	
				Home Address	
				Tele. No.	
				Zip Code	

Date & Time of Entry	12. Date & Time Walkaround Began	13. Date & Time Closing Conference Began (1) (2)	14. Date & Time of Exit
----------------------	----------------------------------	---	-------------------------

☐ No ☐ Reason

Establishment Name: \_\_\_\_\_

No. : \_\_\_\_\_

1. Safety & Health Prog 0 1 2 3

Written Y N

Copy Enclosed Y N

2. Communication of Prog to EE's

0 1 2 3

How?

*general safety once a month*  
*Daily tool box*

3. Safety Meetings 0 1 2 3

Frequency:

4. Enforcement 0 1 2 3

How?

5. Safety Tgn Program 0 1 2 3

6. Health Tgn Program 0 1 2 3

7. Safety Staff Y N *Corporate & on site*

8. Health Staff Y N *Corporate*

9. Accidents Invest. 0 1 2 3

Preventive Action Taken Y N

10. Compliance Program 0 1 2 3

Hazard

11. Medical Program 0 1 2 3

Frequency

Agent

Extent

Content

2. Hazard Control

Engineering 0 1 2 3

Personal Prot. Equip 0 1 2 3

Regulated Areas 0 1 2 3

Emergency Procedures 0 1 2 3

13. Haz. Comm. Prog. 0 1 2 3

Written Y N

14. EE's Access to Rec. 0 1 2 3

copy of 1910.20 avail? Y N

15. Records: 101-200-Supplement Hth

if SH, specify

*Required 2013*  
*2014*

16. Notice to Employees (Poster)

Y N *HR EE bulletin*

Add'l Comments:

*Contractors*  
*progressive disciplinary system in place*

*Safety Advisory & committee c. ee's*

*Reports internal & external*

*PPE - hard hats, safety shoes, glasses, ear plugs, gloves*  
*Certified PPE assessment*

*hearing conservation programs - certain areas & some training - monitored*  
*85dB audiometric testing on site by person*  
*ERT Specialist*  
*Wannings*

Company

Inspection Location

Inspection Number

**Occupational Health Program.** An adequate description of the employer's health program shall be included in each case file. Supporting notes shall include OSHA observations of program enforcement as well as relevant comments made by management or employees regarding safeguards, precautions, protective equipment, routine procedures used for protection in plant processes, training efforts, experience of employees with symptoms, etc. Specific comments shall be made on each of the following program elements, as appropriate:

1. Monitoring program (who, how, analysis, schedules and results);
2. Medical program (frequency, protocols and records);
3. Education and training programs (extent, emergency procedures);
4. Recordkeeping program (types, duration and accessibility to employees);
5. Compliance program (hazard controls):
  - a. Engineering/administrative controls;
  - b. PPE program;
  - c. Regulated area procedures;
  - d. Emergency procedures;
  - e. Written compliance plans;
6. Personal hygiene facilities and practices;
7. Labeling and posting policy and procedure;

Company

Inspection Location

Department of Labor  
Occupational Safety and Health Administration

Inspection Number

Production of Electricity

Taking water & boiled <sup>(each unit)</sup> coal (fuel)

turns to steam → turn turbine → generate electricity - stored sent to grid (Powersource)

Unit 1 2 3 & 4

Unit 3 & 4

Review complaint C

work done 4-11-16

NH<sub>3</sub>

Steel Erect  
Maintenance / Pipfitter

who  
are  
they?

Joey with  
Tim Pattern  
Judith Paroloth  
Contract Co-order  
itor

National on site Temporary contractors

National Steel City LLC

operational - Brantley, AL 14650 31b streets

340 National Steel Contractor on site Plymouth Michigan 48170

Ind Lane Nom

Brantley 35211 / 205-769-9900 Project Manager on site

How long on site 3yr - permanent

What contractor doing: lead directly by Sorelton CO

Completa Day: Daily services

# ee's

Contract end

110 ee's on site

10 ee's involved

John Harrison  
Process Safety  
Management  
Co-ordinator  
I/H Industrial Hygiene

National Steel  
Daniel Hales  
Comp Safety Manager

Ted Burnley  
S&H Coordinator

Maintenance ] ~~Rep~~ Repair  
& Maintenance  
Systems

Company

Inspection Location

Inspection Number

10<sup>th</sup>

Complaint

A Release occurred

~ 3:00 p.m.

26.7/65 Releases

ee 10 working in area (contractor)  
value (

Jeff Pagnus, Process Safety Manager

6 floor below

Value -

ee were aware of NH<sub>3</sub> site

Contractor - (b) (7)(D)

Report GA/Pore

NH<sub>3</sub> Training -  
S&H Review -

awareness training  
ee left area

On Site Med - Nurse (b) (7)(D)

Tim Patterson - Safety Lead for Southern Contractor

Company

Inspection Location

Inspection Number

SDS

Overview of  $NH_3$  Process  
Block Flow Diagram

Tim Patten  
Sanction

4th - 5th Floor making pipe connection  
Repair work on Unit 3

Cutting Back Don Bruce with  
Natural Steel

4/28/17

(b) (7)(D)

(b) (7)(D) (b) (7)(D)

(at) Noherco

has been terminated or laid off

Company

Inspection Location

Inspection Number

# Complaint

Jeff Pagan, Compliance Specialist  
Process Safety

Report not completed. & will  
be completed by Haddad, Compliance Team  
Leader Carlos Hidalgo, NH<sub>3</sub>  
System, Manchester

4 Tank 46,000 gallons (85% capacity)  
~ 800,000 lbs

Company

Inspection Location

Inspection Number

PPE, Use of Power

Company

Inspection Location

Inspection Number

Southern Co

GA Power

Southern Company  
~~Power~~  
Service

Natural  
Steel

April 12, 2016  
Value ~~left~~ checked:  
GA Power  
Control Room  
Unit 3  
shut down  
N34

4th  
Floor  
Kid 5  
Floor

overrun process  
block flow

Vaporizer work on  
NH<sub>3</sub> Syster back in place  
( ) drain valve  
operation

Company

Inspection Location

4-27-16

Inspection Number

Jeff  
Jahn

National - Union  
Dance

(b) (7)(D)

Swatlow Contractors

Unit 3

where left craft  
after rounds man

SLID - 7.5 7/00

Contraction 4th Floor

13 Floors

2 in Pipe NH<sub>3</sub>

Company

Inspection Location

Inspection Number

vaporizer after (3)  
Maintenance

Between  
7 & 8  
Floor

BWN003-YC-5014

7 & 9

P & I D

E 24680 SH1

Vaporizer

A

in Insulator  
control in line  
to storage tank

Emergency Resp Box  
out side the  
vaporizer

Emergency Resp

Selective  
A/B  
Fume  
Ammonia  
Vaporizer  
A

Note Taking Sheet

U. S. Department of Labor  
Occupational Safety and Health Administration

Company

Inspection Location

Inspection Number

(b) (7)(D)

Union Steward for National  
TIM Pattern Project Safety Southern  
Daniel Halls Corp Safety, National

\* (b) (7)(D)

have not met  
sup for 10 exposed workers  
for National Steel

5/3/15

Company

Inspection Location

Inspection Number

Ted

Jeff, Ted GA Power

Jim - Southern

(b) (7)(D)

Union Resp National

Name. - Nathan

Incident

4/11/15

4:30 P.M.

Unit 3

- generate electricity

- source vaporizer (change lg to gas)

conducting line / boiler cas

the ~~NOX~~ gas (prevent ozone)

National see small odor (10 sec's) working

under the vaporizer (7 1/2 floor)

National on 2nd floor welding pipe (duct)

Stainless steel to. Work started the

prior to incident &amp; completion was

the day after the incident.

see of National see to evaluate the area

because of the odor. Notification was

conducted via word of mouth

National <sup>primary</sup> <sub>ma</sub>  
10cc 150 cc

(b) (7)(D) Southern <sup>primary</sup> <sub>insp</sub>  
2  
↓  
is not the  
sup, 46 cc

Single Power  
4 cc's

# Note Taking Sheet

U. S. Department of Labor  
Occupational Safety and Health Administration

Company

Inspection Location

Inspection Number

Head count conducted via National

Identified 10 employees immediate

sent 2 to Southern on site nurse

Station (b) (7)(D) (b) (7)(D) contractor for Southern

He treated for 1st acid inhalation

flush eye (Steward + 3 co's)

Laborer Broken Contract by Southern &

National Steel) Redaction In Force.

Explained 11 C. & 11th Street Blower

No further medical treatment.

National notified TIA at Southern. Control Room

operator did not show

Vaporizer - PM

Replace vaporizer (contractor - Fluor Daniel)

Yard / word of mouth

Alarm system required by GA

was not activate

No alarm system activated

(Sensors) 50 ppm lower & light horn at 250 ppm

Hand shown appears (read in control room)

Contract to Southern

National Sweep Area.

GA Power did not activate alarm system

# Note Taking Sheet

Company

Inspection Location

U. S. Department of Labor  
Occupational Safety and Health Administration

Inspection Number

NO alarm system ~~was~~ activated  
Control Room - Shut down from control room

operator shut down system flow up  
NH<sub>3</sub> stopped

Start up vaporizer - 4:30 p.m.  
operator did start up (maintenance)  
all maintenance & personal training

222

P I & D - vaporizer  
operator solved leak (Robert Harte)  
not sure who replaced leak

Value calculated 1/2 inch  
Relief valve & value calculation  
Relief valve outlet

(b) (7)(D) (b) (7)(D)

(b) (7)(D)

Occupational Safety and Health Administration

Company

Inspection Location

Inspection Number

Driver Hale

Resume

7/6/16

met c Poyon

& TIM-Corp

Southern Company - sub

who is

Tim Patterin

(b) (7)(D)

Interview National Steel

Harold Crowde - sup

Document that workers need unobstructed

Incident Report - GA Power

who's H/C Program - Southern Co (GA Power Training)

ammonia unloading purge system operation

Interview Maintenance - GA Power

who works on vaporizers

Operators on duty → Robert Holtz

NH<sub>3</sub> Training for National Steel

Relief Valve Calculations

PM

ERP

Outstanding Doc's

PM

ERP

PHA & Remediation

Incident Reports

M. I

Operating Procedures / ? ?

What was being done on vaporizer ✓

Who was involved Fluor

Vaporizer semi-cooler

MEP/PSM Review ✓

Hot Work Permit see contractors

Company

Inspection Location

Inspection Number

## Incident Report

GA Power does not maintain 300 Log for NS  
operator:

rec'd call from National Hel 7/8

Company

Inspection Location

Inspection Number

~~Nationast~~ TO DO For Warehouse

300 Log

Incident Report from Inhalation bag

Scanning Records

Sup on Duty for Contractors

## Keep for Bowen Records

I acknowledge that by signing this sheet, I have received and understood the hazards associated with anhydrous ammonia. The alarms and evacuation process specific to Plant Bowen have been described to me.

Signature \_\_\_\_\_

Print your name \_\_\_\_\_

instruct tender operating off  
of 7-11  
chain valve →

With rest  
statements

operator Log  
Sheet

<del>Signature</del>	<del>No.</del>	<del>Class</del>	<del>Exp.</del>
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## SOUTHERN COMPANY PROJECT SECURITY RULES

Violation of the rules listed below will be grounds for barring the violator from the properties of Southern Company and all subsidiaries properties (hereinafter collectively referred to as "Southern Company") for extended periods of time at the discretion of Southern Company.

### I. ENTRY/DEPARTURE FROM THE PROJECT SITE

There are specific rules for gaining entry to and departing from every project site. A copy of such rules is available at the project site. These rules include requirements for identification, valid driver's license if operating motor vehicle, search of the individuals and their personal property (including vehicles, lunch boxes, parcels, etc.), and parking in designated areas.

All jobsite personnel are required to know and abide by these rules, and any other special project site rules. Lack of knowledge of any rule will not be a satisfactory excuse for violation of the same.

### II. SOUTHERN COMPANY TOOLS, EQUIPMENT, AND MATERIAL

All tools, supplies, material, equipment, computer hardware, software, electronic storage media, vehicles and services belonging to or procured by Southern Company shall be used only for the benefit of Southern Company. A Clearance Pass signed by an authorized Southern Company authorized representative must accompany any material, tools, equipment, electronic devices, etc., leaving the site.

### III. PERSONAL ELECTRONIC DEVICES

The possession, use and/or connection to Company networks of any personal electronic devices to include, but not limited to, cell phones, cameras, televisions, recorders, radios, iPods, MP3 players, CD players, and USB storage devices is prohibited without the express permission of a Southern Company authorized representative.

### IV. CONDUCT ON THE JOB

The following are examples of conduct which will not be tolerated:

1. Stealing
2. Fighting
3. Harassment based on sex, race, religion, national origin or other unlawful reason, including conduct or languages derogatory to race, gender, color, religion, age, national origin, disability or veteran status such as, but not limited to, jokes, pranks, epithets, written or graphic material or hostility or aversion toward any individual or group
4. Threats of violence
5. Violation of OSHA/EPA or other Federal/State/Local regulations
6. Conduct that may harm or be hazardous to any property or life or limb of any other person or entity on the property
7. Use or possession of any firearm on the property
8. The use, possession, distribution, sale, or being under the influence of illicit drugs, alcohol, abuse of prescribed medication or use of medication prescribed for someone else

### V. DRUG AND ALCOHOL SCREENS AND BACKGROUND INVESTIGATIONS

Based on the work or activities that an individual will perform while at a Southern Company worksite, the individual may be subject to drug and alcohol testing and/or background investigations. Details regarding such requirements are part of the contract between the individual's employer and Southern Company, and a copy of such requirements can be provided upon request.

## CERTIFICATION

I have received and read a copy of the Southern Company Project Security Rules from my employer and I agree to abide by them. I understand that violators of these rules may be removed from Southern Company properties and Southern Company may refuse to readmit such violators for extended periods of time.

In consideration of my having access to Southern Company property in connection with my employment, I hereby consent to the search of myself and my personal property (including vehicles, lunch boxes, parcels, etc.) knowing that such searches may occur at any time when entering, departing or while on Southern Company premises. Further, in consideration of my having access to the project in connection with any employment, I hereby consent to drug and alcohol testing and background investigations by my employer and **voluntarily consent to the release of aforesaid results and investigations to Southern Company.** I agree to report to my employer any prescribed medication, any over-the-counter medication, or any substances taken which could adversely affect my ability to perform the essential functions of my job at the project site safely and efficiently. I understand that refusal to submit to drug and alcohol testing, failure to provide a specimen within two hours, leaving the testing facility without Southern Company's approval or tampering or adulteration of a specimen will be considered the same as a positive drug test result.

DATE

SIGNATURE

EMPLOYER NAME

TYPED OR PRINTED NAME

Driver License	State	No.	Class
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Driver License shall be verified for all positions that contractually require driving.

Company

Report

Date 7-8-16

Section Location

Operators

Inspection Number

Equipment List

Overview of Process

(b) (7)(D)

Process

(b) (7)(D)

Unloading

Process Engineer

(b) (7)(D)

Sup - not on site night shift

Operator Safety Checklist for Start up 7-11-16

Hydrostatic  
Welder

~~Work order for heater installation by Floro~~ ??

~~Nitrogen Purging Procedures?~~

~~emergency escape route not a program  
only need for UNIT 3~~

What provided to Contractor is / training on site orienter  
program  
Regards to  $NH_3$  & emergency action

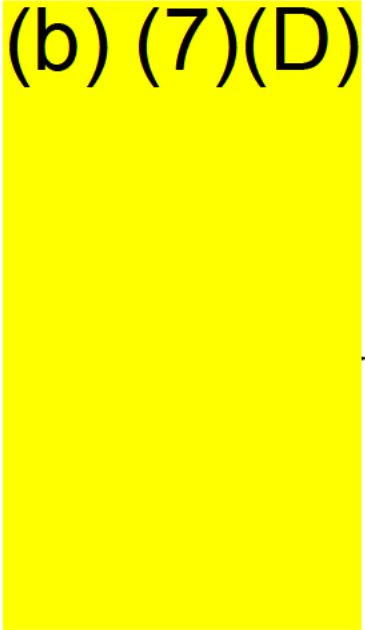
Who actual involved a Start up  
Shut down prior to Nitrogen Purging

$NH_3$  Team - Sup Al Williamson

Potential Release can occur at Vaporizer  
Storage tank Distance  $\rightarrow$  300 yds  
from tank to vaporizer

Who covers  $NH_3$  & Emergency Procedures  
& Contractor? Who's Responsible

(b) (7)(D)



2 Reports to or from FPD  
Ref report # in Incident Report

2 Identify Value # ~~5000~~ \*

Contractor - Controlling

22, Contractor Injury/Illness LOS  
adverse  $\text{NH}_3$  haz in Unit 3  $\text{NH}_3$   
Review Operating Process.

Step 3

Initial Start up

Normal operation

Temp ops

Assigned person for emergency shut down

Normal Shut down

Operating Limits

Consequence from deviation

Steps Required to avoid deviation

Control Measures

Safety System & function

Procedures accessible to operators reading  
annual Review of operation Procedures

2 In form Contractor of  $\text{NH}_3$  hazard  
how  
by who  
Notification due

Company

(b) (7)(D)

(b) (7)(D)

Number

(b) (7)(D)

Company

Inspection Location

Inspection Number

GA Power - Resume 7/12/16  
 Things to do Jeff & Ted

1 Insp ck list for start up -

Insuring Records for Unit 3 Operator  
 List of all operators

\* 7/12/16

Operator -

(b) (7)(D)

Office Direct

(b) (7)(D)

(b) (7)(D)

\* 3 Unit \*

(b) (7)(D)

- If a line system it would shut & meter  
 have meter to ck. (b) (7)(D) stated  
 during NH<sub>3</sub> unloading connector were in form  
 ~ 1/2 month

\* Who made decision when the Unit  
 would start up?

Jim, Sullivan & Wales, National  
Refused to meet to close on Thursday  
CA Power can't meet c OSHA  
on Thursday CSHO requested  
National Steel be prepared to  
close on Thurs. National Steel  
declined for Thursday

\* 15\* Aid Notes are not released

\* - Inhalation hazard Recordable

Refusing to meet c OSHA because  
CA Power not available on  
Thursday

Wednesday CSHO need time to  
review documents.

Company

Occupational Safety and Health Administration

Inspection Location

Inspection Number

(b) (7)(D)

300 Log NS

full pages  
of  
T/m

storage tank  
pumps

copy  
PSM

Hot Progs  
PHA &

Incident NH<sub>2</sub>

Incident Report - GA Perry

Operators in Control Room?  
Unit 3 - Sup? Robert Holto

Hot Permit  
Program (?) ck c nsc

PHA / Audit / Audit / Revaluar  
2011 → Revaluation 2016 (?)

800,000 lbs (4 tanks) ✓

PI & D for #3 Vaporizer ??

Operation Procedure ??? } start up  
shut down  
Temp  
emergency operators

FEAP

Procedure for handling small releases ???

ERP (Team) for entire plant ??

Rec mfg set point for sensor?

PPE Assessment \* - Mechanism  
unloaders  
operators

PPE

Ref Tech

M.I. Program (

- med evaluation for

Reval  
- PHA inter  
operation  
manual  
214.1.  
- M.I.  
- Resp  
- ord  
unloading  
arm or  
sheet  
start  
sheet  
- Log oper

Unit  
shut down  
off line

Jan  
Shut down  
Sheet  
Loc  
Start up  
Sheet  
purging

# #3 Vaporizer

Shut to do routine maintenance  
(Replaced the heating element)

PM: maintenance  
Replace (heating element)  
Rec. every 5 yrs  
work orders repair

3 months Vap. Repair Replace  
PM Repair maintenance Replace  
#3

March  
April  
May

Replace heater unit  
on vaporizer  
every 5 yrs

In house  
Fluro  
not sure  
who

Valve left over  
by GA Pomeroy

- Purge - valve left over  
David Hatch - aux operator

NH<sub>3</sub>  
Truck  
+ Rail  
unloading  
3-4

David Hatch ✓

(b) (7) (D)

Purge system

Fluro came in  
& Replace heater  
PM

Mechanical Integrity

- work order for National ee's  
✓ Operator in control (~ 4 ee) <sup>hot work permit</sup>  
demanded up Unit 3 (13 floors)

✓ GA: EAP  
Power

Intense  
Sup. Don Brown, Natl  
- All in evidence

\* Manage Dax Bumpers

GA Horn 24 hrs/7

Natl 7-5:30

So (b) (7)(D)

GA Power investigation - investigate  
National Control / Southern  
Southern Contractor

PM for Vaporizer - routine maintenance  
- work order in

MOC - OK

equipment List - work orders on vaporizer for past 3 months  
PM mechanical

Printing of sensor  
mechanical Integrity Program  
P&ID ??



5 Reviewer

Block Flow ✓  
Startup / system 4-11  
owner view operating  
Hot work permit (3)

WH3  
shot off in 4 mins  
after incident  
↓  
Chuck To

Unit 3  
Security  
6911  
+ Control Room

Incident  
Past Report for Unit 3  
EPA

Original 2001 -

Remediation - 4x2

800,000 lbs on site

Audit  
5 yrs

Electrical Classified

??

Relief Valves

??

Small \* TIM - National  
Maintenance  
Contractor education  
done National  
Questions for TIM Natta

**U.S. Department of Labor**  
Occupational Safety and Health Administration

**Notice of Alleged Safety or Health Hazards**

		Complaint Number		1083922	
Establishment Name	Plant Bowen Georgia Power				
Site Address	317 Covered Bridge Rd. Euharlee, GA 30120				
	Site Phone	770-606-6411	Site FAX		
Mailing Address	317 Covered Bridge Rd. Euharlee, GA 30120				
Management Official				Telephone	
Type of Business					
Primary SIC		Primary NAICS	237130 - Power and Communication Line and Related Structures Construction		
<p><b>HAZARD DESCRIPTION/LOCATION.</b> Describe briefly the hazard(s) which you believe exist. Include the approximate number of employees exposed to or threatened by each hazard. Specify the particular building or worksite where the alleged violation exists.</p> <p>On April 11, 2016 while working in the unit 3 &amp; 4 air heater area, Southern Company/Georgia power subjected 10 of National Steel City's employees to an exposure to ammonia. Employees were not notified of the hazards in the area and were not provided with Safety Data Sheets (SDS's) for the ammonia.</p> <p><i>Tues 8:00 A.M.</i>  <i>Ted Burnley</i>  <i>404-834-2379</i>  <i>Safety Co-ordinator</i>  <i>Corporation</i> ✓</p> <p><i>This one</i></p>					

Note Taking Sheet

U. S. Department of Labor  
Occupational Safety and Health Administration

Company

Inspection Location

Inspection Number

(b) (7)(D)

(b) (7)(D)

Photo sensor

(b) (7)(D)

6:30-3

operator

~~6:30-6:30~~

6:30-6:30

7-8/16

already have

H.C. - no sig  
REC

100 REC

Training  
Hot work Progra

CKC  
Platons or  
Person

P I D

NH3 Process

operating procedure  
manuals  
not provided  
only the  
vapour  
procedure

3 day audit  
1/1/90  
Ref document

Relief  
Valve  
Calibration

Process  
was procedure  
for handling  
small release  
overlooked  
by process

EPA - already  
provided

DO NOT  
USE

NH3 Sensor  
Set points  
REC

Incident  
Report (1)

PM for  
Japans

PPE ASS  
Chen Harese

Company

2. Power

Inspection Location

U. S. Department of Labor  
Occupational Safety and Health Administration

Inspection Number

7/12/16

- Sup Mitigation in Residue } no recordable for 2016

300 Log 13/14, 15, 16 - GA Power maintaining  
Training/Awareness for NH<sub>3</sub> at Facility  
EE Notified of start up of the unit

info on start up report from Southern Company  
S & H Consideration of workers  
Start up in area

Insulation  
Repaired inst  
on piping

Hot work Permit issued in area

Status or update of ee seeking  
further evaluation

H C Training including GHS Training

Where ee met upon exposure  
Head count - who accounted  
Who was Responsible  
Don - Sup - in office  
Cooling Tower #3  
evaluation point  
Trailer #2

(b) (7)(D)

# ees in area only 10  
any others not mentioned

(b) (7)(D)

In 10 ees

Company

U.S. Department of Labor  
Occupational Safety and Health Administration

Inspection Location

Inspection Number

played  
and 4 more

unit 3  
ee 2013  
no camp

National → Southern (Tim)  
↓  
performance - work order

National - 76  
Steel

ee  
1000's incident

↓  
\$300

Unit 3 - Saw  
purpose

Officer

Maintenance +  
turnaround

- M. I Procter

SCR -

Original PHA

- 2016

Mr. Ted question document not provided  
in front of Contractor & thought they  
should not be in room

Southern

Thurgood to Do

copy of schedule of worker

(b) (7)(D)

(b) (7)(D)

- Interview

Report of NH<sub>3</sub> Release (Incident Notification & follow up  
awaiting close out investigation from GA Power

Copy of GA Power Contract

(b) (7)(D)

(Southern - Contractors

Responsible

→ Southern CO. (work order  
schedules  
verbal  
will answer

(b) (7)(D)

JSA = have not been able to locate

(b) (7)(D)

Southern  
Contract

Don't know who operator / Team Operator

Rep Safety for Southern & NSE  
Rely on GA Power Contractor  
Safety & Health Program

Metc Urida (b) (7)(D) 7-22-16

Start up sheet 1.34

- 12 doz
- NH<sub>3</sub>

Initial fire

Wall pressurizer

NH<sub>3</sub> go in get 1/2 load (unit)

at what point NH<sub>3</sub>

put in at different time

Auxiliary & Control Room operators

Log Book - Unit

operator - Night Shift

Training Record certificate

Training operator Team Leader

Training Team Leads  
(b) (7)(D) - 2nd Team

List operator

4

outstanding doc 7/22/16

- operator log
- connector program, MI, Incident
- pressurizer

3 BTD  
7 AEO

## Control Room Operators on shift during incident

~~Trained by Barry HX - Operator~~  
~~Training doc. PSM - (b) (7)(D) - sup~~  
~~Trainer unloading - (b) (7)(D)~~

(b) (7)(D)

= shot off  
ammonia  
Team unloading

Lead  
Control Rm  
3 level  
upstairs on 7 1/2

(b) (7)(D)

↓ Drew up manager  
↓ Plant Man (b) (7)(D)

(b) (7)(D)

### Response

(b) (7)(D)

NH<sub>3</sub> Activator - NONE  
Set point 50 - alarm  
Did not activate

F/C  
Inst & Cont  
ck sensor

(b) (7)(D)

ERT ??? not on team

- Team leader
- Clearance
- operator unit 3
- rowing operator
- Aux Equipment operator

4-11-16

- Start up ck List
- clearance form
- pre-fire ck list
- NH<sub>3</sub> - purge sheet clearance

- Pre start up or initial start up was not adequately conducted prior to start up of Unit 3 SCK
- Failed to inform contracted employee of start up that involve  $\text{NH}_3$
- Incident Report did not include contractor employee or investigator

NIS @

HAL medical

HAL providing ee of hazard of  $\text{NH}_3$  prior to work

Unit 13

7.9

7th

6th

5th

4th

Floor vaporizer

sensor

B

C

A

grate in floor

Inlet

5013

5014 outlet

5010

5009

Photo graph & draw

work area

Contractors

Entry between unit 2 & 3 on ground floor South entrance of 3-4

elevators

5026 Vent Valve

Grate drain pan installed

Control Room

3rd

2nd

Boiler AED for work

1st

Swope assignment every Sat

AED - CK the equipment BTO -

# Note Taking Sheet

U. S. Department of Labor  
Occupational Safety and Health Administration

Company

Inspection Location

Inspection Number

(b) (7)(D)

(b) (7)(D)

**U. S. Department of Labor**

Occupational Safety and Health Administration  
Atlanta-West Area Office  
1995 North Park Place, Suite 525  
Atlanta, Georgia 30326  
Phone: (678) 903-7301  
Fax: (770) 984-8855



# DIARY SHEET

[illegible]

Note To:

Company

(b) (7)(D)

Equipment  
Opers

Inspection Location

7/22/16

(b) (7)(D)

Inspection Number

(b) (7)(D)

Tashwanda Pinchback Dixon - Attorney  
Jed & Jeff

Attorney discuss had concern about  
- how long the inspection

Could not locate sheet check for Start-Up  
Operator

Att kept interrupting & telling me  
to draft a list of all my questions  
& documents

Interview

(b) (7)(D)

any Start up  
ins. Start up  
for Start up  
maintenance

Hot work program ✓

P

PI & D ✓

operator procedures ??

over min ✓

list equipment ?? just for vane

set point - sensor ??

work order ✓

3 months (March / April / May) ✓

PPE hazard Pers ✓

12 near miss / Incident # ✓

MI

operator with Team, operator Training ✓

overmin process ✓

equipment list pressure ??? ✓

✓ Training Record ✓

✓ work order for Flares. ✓

procedure per handle ✓

- Super Team operator

(b) (7)(D)

Greg Stevens

BA For Local union 72  
pipe fitters of Atlanta GA

Phone # 404-394-5003

~~BA~~  
Business  
Agent

Todd  
Rush

C. A. Power  
Sullivan

(b) (7)(D)

TSA

Note Taking Sheet

U. S. Department of Labor  
Occupational Safety and Health Administration

Company

Inspection Location

Inspection Number

Failed to inform employees of present  
of NH<sub>3</sub> & start up of Unit 3  
obligation to know in order to protect  
your employees

Safety

(b) (7)(D)

JSA completed for 4-11-16

took it from

(b) (7)(D)

& don't know what happen to it  
Mr. Hales stated he started working  
for National Steel City.

K/D

UNION

Contact Business Agent

Any ee's still further evaluated  
any additional it

any

Ever involved with prior ammonia release

Southern / National

- any other report on incident?

What protocol  
for evacuation  
Route?  
was it followed

- Statement Hales +

- Location at time of incident

- Length time in area

- work order for job

- Who's responsible for informing ee of system start up  
written protocol; who responsible for informing Southern, National?

- Contract between Southern + GA Power

- Did see people work on vaporizer  
How work assignment given or process  
Emergency Did you know how long unit would be down? Start up discuss  
ever

- alarm notification

- procedure for notification from GA Power during emergency

- ever see similar incident

- any discussion of evacuation route after project started  
yes (b)(7)(D)

Training for Records those not planned

(b)(7)(D)

- When Southern ee working at time of U

- Have any discussion between GA Power  
& Contractor taken place  
who was operator

GA Power

- Forms notify of haz in area?  
ever?

Inf sent to Location  
Main office of GA Power site

GA - Distance measure to vaporizer

Alarm - Location / compare to P I + D

Who responds under contractor

(b) (7)(D)

(b) (7)(D)

(b) (7)(D)

# Note Taking Sheet

Company

Inspection Location

U. S. Department of Labor  
Occupational Safety and Health Administration

Inspection Number

Southern Company to  
Parent Company per GA Power

↓  
Southern Company

\*  
= Invoice Vaporizer invoice A unit  
Drain Value - 1

all drain valve on A, B, & C  
but A & B drain left open  
& C

David Hales

Corp Safety Mgr

National Steel City

(b) (7)(D)

Job Steward Local 72

Greg Stevens BA For Local 72 Pipe Fitters  
phone # 404-394-5003

Company

Inspection Location

Inspection Number

7/12/16

On returning to site Contractors were available. Interview conducted a National Steel

Some discussion from GHA Pours Regarding doc request. Not allowed to meet Contractors unless they are present. Residence in which I can return to plant to close c. contractor because Mr. Ted would not be available. Interview. C's had to have Union Rep explained to decide.

Warned Mr. Ted that the inspection was mine to conduct & he could not dictate how I conduct it. OSHA has protocol & I was more aware than he was.

Co did finally provide an alias name who may possibly enable them to start up operation.

Mr. Ted stated he didn't appreciate my discussing lack of doc not being provided in presence of contractor. It has been a fruit session since being at ensp except Wed 7/6 when he failed to interview contractors I was on site.

Company

Inspection Location

Inspection Number

7/6

Upon arrival at GA Power  
no one present but Tim & Payer  
stated they didn't know where  
Steel (National). Request contact  
but no avail or attempt  
stated National not on site anymore  
Call Mr. Hale C. National on  
7/6 He stated GA Power never  
contacted him that would meet  
a me on Mon / Tue he had to go to F/

7/7 Mr Hale called stating GA Power  
stated he needed to be available  
7/7 Explained to Mr Hale that's not  
true & they are spoke on yesterday  
on how to properly start up Person on 7/11

7/8

- Union
- Start up operator & (b) (7)(D)
- DOC / Inf question answers
- Unloading A/Hg Yach

Company

Inspection Location

U.S. Department of Labor  
Occupational Safety and Health Administration

Inspection Number

7/6

GA Power could not answer  
questions & provide all requested  
Doc. previously requested  
Agreed to schedule Friday  
pull remaining info & doc.  
& interviews

GA Power could not provide  
any names as with spec question  
so CSHO could conduct appropriate  
interviews

1st Day - had to await personnel  
it was lunch time before arrival

2nd Day = Flack lack of co-operation  
National Did help Request info  
& document - National provided the

7-6-16 3rd Day - info + all doc still not  
available however some were  
As more info found additional info  
Request Contractor not available

7-8-16 4th Day: Request for additional  
& interviews as info come in

- need hot work program
- permit for hot work

Company

Inspection Location

Inspection Number

National City  
David Hales, Corp SV

Tim Patton, Project Super for  
Southco

SCR - Selective Catalytic Reactor

↓ GA Power took over

Awareness NH  
Contractor Safety

Closing Conf 7/19/16  
Lin Pattern, Dates (previous resp through)

(b) (7)(D) minor Rep.

① Inform ~~ee~~ <sup>contracted</sup> of ammonia  
prep shift safety meeting morning  
(b) (7)(D) <sup>standard</sup> Job Task Discuss  
Start up of Unit 3

② Training NH<sub>3</sub>

No alarm or warning system  
was activated at time of Release

HAL ↓ for CSHE  
str proposed

11C

3 days  
15 day/Contest  
Follow-up

(b) (7)(C)

E-Group

Mr. Hales states Don Brow, Sr. Prof Superintendent for  
NSC  
Southern Company (

(b) (7)(D)

\* 4/11/16

- Emergency shut off  
where?  
who?

operation  
emergency shutdown OK  
Temporary operation (None) OK

- level of protection  
(Level C)

- Resp. Full Face

- Location of eyewash/shower  
Unit 3 (vaporizer)

Reduction  
(NDX)

$\text{NH}_3$  (+ titanium-vanadium)  
Catalyst

IDLH (300 ppm)

$\text{NH}_3$  - explosive in Air  
16-25% via volume

- hand held monitoring equipment

- Buddy System utilized to address

- 911 called to notify On-site ERT

- Who on ERT Responded

- Operator Team leader to activate ERT

- Who Did Operator Team leader contact

- Maintenance of  $\text{NH}_3$  system (who)? Maintenance Team

- (2142) FIVE GAS Conditioning System (FGC) 6/2004 / annual Review

Program ① Proactive  
writing ② 1st thing 1st  
Execute ③



# Note Taking Sheet

U. S. Department of Labor  
Occupational Safety and Health Administration

Company

Inspection Location

Inspection Number



Things to DO

Review Unit 3

Storage Area

3 ee's witness on Report

Interview Operator Control Room

Operator Team Leader

\* Jeff \*

- medical mismanagement - HAL \*

Invoice - Work Order Catch Par

- update - (b) (7)(D) - Requirement

Evacuation note

turn around

- NSC work order

- Who is (b) (7)(D)

- Was the Sensor in good operating condition

(b) (7)(D)

Contracted Worker  
OK Training Record

The Co investigation (Incident Report) did not identify the value & lead to believe that only (a) value was left open. However, the form annex dated August 5 does not indicate which values not describe the chain per value

- on 9/15/16 it was found that 6 values were left open (Memos also verified on 4/11/16 by operator that 6 values were left open)

\* Again conflicting / confusing info

# GA Power Form

(b) (7)(D)

new tag  
barcode  
old tag

P I + D Equipment list  
Procedure 2141.800

update  
to reflect  
the change

Valve Identification (code to same as P.I.D. #52 + #57)

\* Cross Reference with Procedure  
DO NOT identified the same

## Subpara Documents:

- Page 00008 - 1 injured ee

- Page 00034

\* Request entire notes \* (why not available)  
lean header  
note shift all  
all activity  
not on c n 2

- Page 00063

2007 Operation Procedure 2141.800  
who responsible for annual review & certification  
was it Done? Provide ~~the~~ certification

- Page 00069 ???

PSM Team

AEO

- Procedures - are they current  
- Who is responsible for F # 1 (values)  
- Was it done prior to Start up  
- why not

- Rev 9-16 Document from email ✓

- Review Interview Statement ✓

GPC 00078

This ck sheet was not used

1. Purpose of cklist: - <sup>PO</sup> not know
2. Was it suppose to be use
3. Have ever been used in past
4. Why not used per 2141.800

GPC 00070

Valve # 52 / # 57 same  
as drain valve left open

PHA Original PHA 2001

5 yr Revalidation 2006

UnResolved  
Resolution  
Corrective  
Action

- Vaporizer - Replacement in kind

Update Boiler CK List

↑<sup>100</sup> C . . .

## NOTIFICATION to Contractors in UNIT

- Who Responsible
- Why they weren't notified
- <sup>any</sup> ~~What action~~ Plan of Action for future situation

## Incident Report

Required to involve Contractor when employees may or had been affected

Why not involved a investigator?

Inlet VALVE & Outlet Valve for  
Vaporizer A & B

10 ees contract

3 Unit

Review shift notes

OR 63

critical current unneeded who responsible for cable

GPC

2

- one ee exposed GA Power
- 6 drains left open instead

⊖

(b) (7)(D)

- need position description

- verification of aligned drain

9-22

(b) (7)(D)

- need position description

- Thus 00069  
- why not accomplish

(b) (7)(D)

- Contractor co-ordinator

⊖

(b) (7)(D)

- position description

- work on Vaporizer prior to 4-11-16

- evacuation route for Unit 3  
control room location



(b) (7)(D)

note 6 drains left open

- Computer Sheet symbols  
What do they mean

- Rod move to 7th Floor? what means  
EUBANK

Pre Start up Safety Review ((i)(2)(i))

295 start up Process

8 20

Equipment Clearance

Start up following  
turn a

if i G

## Interview List

(b) (7)(D)

- How are duties distributed Daily or by position
- Position - Duties : SUP
- Where were you when incident occur
- What action taken
- Explain what occur
- Who was responsible for valve alignment upon start up
- Ever involved with turnaround
- Ever involved with startup following turnaround
- CK list; are activities recorded on CK list  
What? How maintained
- Familiar with 2141.800 operation procedure regarding
- Is there a checklist (written) involving position of valves.
- Ever involved in  $NH_3$  release in past  
when what where & how
- Have you had training on  $NH_3$  awareness  
BY whom
- HAVE you rec'd training on Operation Procedure  
SCR &  $NH_3$

Resume 9/15/16

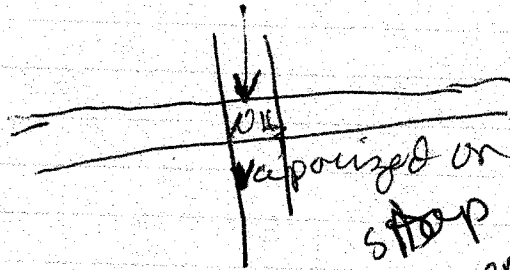
att, left, led  
on start up

2 valve left

3A - left + open  
drain value - inlet  
3B - inlet

all  
should  
have  
been  
closed

Control Room  
PLC



on it on  
stop ~ 6 inches  
no enclosure  
at time of incident

F. / no  
install  
catch pan

now the  
drain have  
catch pan  
for any 19  
not completely  
enclosed

## Control Room FLOOR

VAPORIZER

#

Inlet  
Outlet

Contractor - Boiler Room Location

Review Drain & Flow Area

Other than Contractors any other  
evacuation

Why no alarm notification activated  
for evacuation  
Not aware of the extent  
of Release

May 2016 Remedial Action

Corrective Actions not documented  
↓ Jeff states new  
keep me will please  
update

\* Training of Waldrop & Novell  
Has this been completed ✓

Schematic of Unit 3 ✓

outline location of Control Room  
& various FLOORS

Sensor at vap  
port activate  
RV call to  
emergency  
call to supervisor  
call via radio

Control - 3rd  
vaporizer - 7 1/2 floor  
contract - 4th floor

# Operational Procedures

Operational manual

— Last update ? not sure will get

\* 800 + other procedures not included in Content

Possible next to update to reflect

— Pre-start up other operational procedures

HOW documented ?

— Who decided start up date  
written or verbal ?  
? have had meeting  
? Drew + emailed operators  
to use CK list

— Who notified contractors of  
national  
work to be done

Who from GA Power have oversight ?

Start up

# Incident

- Incident Report - Any updates? ✓
- Individual name on Report?  
Position & how involved in incident?
- only provided 1 incident @ loading area  
but audit indicated up to 10 ????
- Why Contractor not involved in W/O  
investigation ???  
— Discuss
- Report only shows <sup>Drain</sup> valves & were  
not identified as to which valve or valves  
↳ Explain specific valve - A & B  
Inlet - Inlet  
Outlet  
What vaporizer or vaporizer  
C  
Standby  
inlet/outlet

Plan of action: ✓

P I & D - show location of SENSOR  
& valve, eyewash etc  
last update

# Questions for GA Power

Interviews

(b) (7)(D)

- Who called control room?
- Who took the call?
- What is OTL?

Control Room physical  
↓ manual valve

small control room  
can't hear  
↓ 40%

Operator Log 10 + 11/16  
1st + 2nd Shift

System

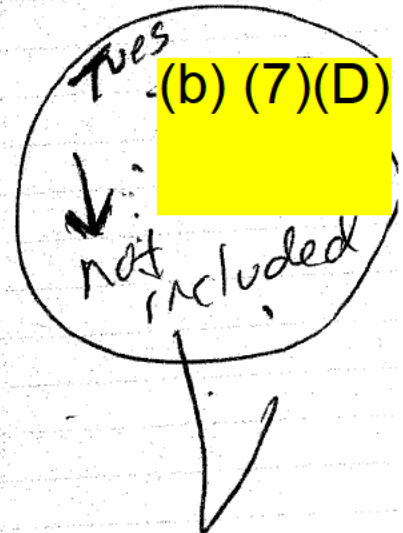
Listed as witness on Report  
From Report  
List + operator provides

(b) (7)(D)

who is  
(b) (7)(D)

not trained  
Per 2015

not a part of equipment  
Catch Pan  
not sure if included in  
PI & D



(b) (7)(D)

## Update on Corrective Action Incident 4-11-16

Current location of sensor? Identify P.I.D. & walkaround

any changes to sensor? where & why ✓ <sup>still</sup> ~~evaluate~~

Any changes to NH<sub>3</sub> Start Up Procedures?  
to include training?

Training to discuss  
PA 501 of operation

## Incident Reports

<sup>near miss</sup>  
Past incident Reports were indicated on  
(1) 2015 audit, you only provided  
(1) 2016

Turn around Jan. 2016  
changes to NH<sub>3</sub> system  
additions or deletion

vaporizer (heat  
up  
NH<sub>3</sub>)  
Rec Replaced  
like kind

no mod...  
no mod...

P.I.D. Reflection to this? → WONE (?)

e-stop on P.I.D. each  
vaporizer  
panel

Drain Valve - manual or through control room

5014 & 5014

modification to NH<sub>3</sub> vap. skin  
drain valves installed

Start up safety Review

NRD # 114448  
Michelle Cortes EPD  
# 7 98568

Georgia Power  
9/8/16 need subpoena document  
9/9/16 meeting @ Att West c Terry +  
Keith

4/11/16

✓ NH<sub>3</sub> Peak ~38PPM  
Ref graph attach  
Incident Report

A-4

✓ Drain Valve on  
Vaporizer slide  
left open

26.7 lbs  
~~26.7~~

✓ normal Flow  
400 lbs/Hr  
to SCR  
6.67 lbs/min

only inlet involved  
valve involved  
c NH<sub>3</sub> Release ✓

@ ~4:26  
NH<sub>3</sub> released  
from 1/2 in  
opens drain  
inlet/outlet  
line from  
2 vaporizers  
service

→ who call  
to whom  
of NH<sub>3</sub>  
smel

~4:30 vapor  
shut off

NSC

contractor  
working on  
air heater  
project  
on 4th Floor

Rec'd call from Alex 9/14/16 on Rexter  
e-mailed Teri on Return 9/13/16  
Return 9/15/16 email Terry/Ket 9/14/16

Copy of  
drawings  
See general

TO Date

Failure to notify Contracted  
workers of the start up  
where N43 Released

Failure to ensure Pre Start  
was conducted to ensure  
values & other equipment  
was accurately positioned

Incident Report - HAZ  
inconclusive

Incident Report did not HAZ  
include contractor (?)

Alarm notification?

Sensors location

is area of  
potential release?

- Operational Procedures  
updated?

## NOTES

Incident Report: list but 10 contractors to 1st Aid  
N/A Medical Treatment  
N/A Evacuated per S&H Mgr  
Have indicated

Review 3 yr audit conducted 8/25/15

— Have corrective action been taken/completed

(1) operator training to include leak investigation

\* Incident Report for 4-11-16

(b) (7)(D)

WHO are they? Work for GA Power  
any contractor involved? ✓

\* Who @ GA Power <sup>specially</sup> responsible for  
contractors assigned of work \*  
NSC.

It's through Southern who  
provides work order to Southern  
to give to NSC.

Through South CD  
Southern Co  
GA Power  
Southern Co, H

\* any updates to Incident Investigation  
with Rec + Corrective Action?  
Completed? ✓

\* Has the Report + findings of all affected  
personnel been reviewed with  
Contractors reviewed for

- drawing

Turn around started  
in Jan, 2016

- What modification took place  
in the NH<sub>3</sub> system?  
Who conducted the modification?

- LAST Turnaround in Unit 3?  
When, What

- How are contractors work orders given

- BY whom

- Procedure for notification in Area 9

???

GA  
NSC

Sonitex Co

↓ discussion

Construction  
Trainer

- Have you rec'd training on hazard com
- Are you familiar c SDS; how to read & interpret the SDS
- Any past issues with drain valve on any of vaporizers
- When was system 1st placed in service following turnaround
- When was the NH<sub>3</sub> bought on line after start up.
- Any exposure or injury since employed
- Any specific instruction or training provided prior to start up following turnaround
- What does computer symbols stand for
- DO you remember any entry into system made on 4/11/16 SHOW EE Sheet
- Any employees exposed during 4/11 incident? If so who?
- Who was involved with valve ~~st~~ closing after incident
- Any briefing/meeting or instruction after the incident? who? what?

Show ee 2141.800

- Are you familiar c Procedures
- Are these procedures utilized following start up
- Are they documented any manner

? 00669 are familiar c procedures  
who responsible for F # /  
- was it done  
- or why not

$\frac{1}{2}$  value or  $\frac{3}{4}$  inch value

are these procedure

If value on GPC on 0070  
same as value on PI-D  
#52 or #57

GPC 00078  
CK sheet was intended to use  
why not used  
Purpose of check sheet

\* 2006 Revised  
resolution for 2001 unsolved

Resolution for 200 ~~16~~  
PIA Revally

Vaporizer  
Replaced in  
K'n